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FINAL (REVISION I)

STORM WATER DISCHARGE MANAGEMENT PLAN

Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

February 1, 2005

Prepared for

NAVFAC
Naval Facilities Engineering Command

DEPARTMENT OF THE NAVY
Base Realignment and Closure
Program Management Office West
San Diego, California

Prepared by

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Dear BCT members:

Enclosure (1) is the Final Parcel E-2 Storm Water Discharge Management Plan (SWDMP), Industrial Landfill, Revision I.

This document is a revision to the original SWDMP for the Industrial Landfill issued in June 2003, based on recommendations made in the 2003-2004 Annual Report for Storm Water Discharge Management at the Industrial Landfill. The National Pollutant Discharge Elimination System (NPDES) General Permit requires that the monitoring program be revised whenever appropriate. The Draft Parcel E-2 SWDMP, Industrial Landfill, Revision I, was submitted for your review on September 30, 2004. Comments received on the draft report have been incorporated into the final report.

Should you have any concerns with this matter, please contact Mr. Keith Forman at (619) 532-0913.

Sincerely,

Keith Forman
BRAC Environmental Coordinator
By direction of the Director

Enclosure (1) Final Parcel E-2 Storm Water Discharge Management Plan, Industrial Landfill, Revision I

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February 1, 2005

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This public summary represents information presented in the document listed below. Neither the document nor the public summary has been reviewed by the regulatory agencies.

Public Summary: **Final (Revision I) Storm Water Discharge Management Plan Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California, February 1, 2005**

The U.S. Department of the Navy prepared this storm water discharge management plan (SWDMP) to meet the substantive regulatory requirements for storm water discharges to San Francisco Bay from the inactive Industrial Landfill in Installation Restoration Site 01/21 at Parcel E-2 of Hunters Point Shipyard in San Francisco, California. This document is a revision to the original SWDMP for the Industrial Landfill issued in June 2003, based on recommendations made in the 2003-2004 Annual Report for Storm Water Discharge Management at the Industrial Landfill. The National Pollutant Discharge Elimination System General Permit requires that the monitoring program be revised whenever appropriate.

The SWDMP discusses the regulatory requirements for storm water discharges associated with industrial activities, the non-storm water discharge elimination and prevention program (NSDEPP), the storm water pollution prevention plan (SWPPP), and the monitoring and reporting program plan (MRPP). In addition, the operation and maintenance plan for the Industrial Landfill contains information relevant to storm water management, and should be considered along with the SWDMP.

Storm water discharges associated with industrial activities are regulated through the California State Water Resources Control Board Water Quality Order No. 97-03-DWQ, General Permit. Because the Industrial Landfill is under the Navy Installation Restoration Program and the authority of the Comprehensive Environmental Response, Compensation, and Liability Act, this SWDMP will meet the substantive requirements of State Water Resources Control Board Water Quality Order No. 97-03-DWQ.

The main requirements of the General Permit are to (1) eliminate unauthorized non-storm water discharges, (2) develop and implement an SWPPP, and (3) perform monitoring of storm water discharges and authorized non-storm water discharges.

The SWDMP meets these requirements by incorporating a NSDEPP, a SWPPP, and an MRPP. The SWDMP also includes as appendices the necessary guidelines and forms to perform the surveys, visual observations, maintenance, sampling, compliance evaluation, best management practices, and reporting required under the General Permit.

Information Repositories: A complete copy of the "Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard," dated February 1, 2005, is available to community members at:

San Francisco Main Library
100 Larkin Street
Government Information Center, 5th Floor
San Francisco, CA 94102
Phone: (415) 557-4400

Anna E. Waden Library
5075 Third Street
San Francisco, CA 94124
Phone: (415) 715-4100

The report is also available to community members upon request to the U.S. Department of the Navy. For more information about environmental investigation and cleanup at Hunters Point Shipyard, contact Mr. Keith Forman of the Navy at (619) 532-0786 (phone), (619) 532-0780 (fax), or keith.forman@navy.mil (e-mail).

N00217.004103
HUNTERS POINT
SSIC NO. 5090.3

FINAL
STORM WATER DISCHARGE MANAGEMENT PLAN FOR THE INDUSTRIAL LANDFILL, PARCEL E

DATED 12 JUNE 2003

IS ENTERED IN THE DATABASE AND FILED AT ADMINISTRATIVE RECORD NO. **N00217.000737**

DRAFT (REVISION 1)
STORM WATER DISCHARGE MANAGEMENT PLAN FOR THE INDUSTRIAL LANDFILL, PARCEL E-2

DATED 30 SEPTEMBER 2004

IS ENTERED IN THE DATABASE AND FILED AT ADMINISTRATIVE RECORD NO. **N00217.004065**

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ACRONYMS AND ABBREVIATIONS

40 CFR	Title 40 of the *Code of Federal Regulations*
BAT	Best available technology
Bay	San Francisco Bay
BCPCT	Best conventional pollutant control technology
BMP	Best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWA	Clean Water Act
EPA	U.S. Environmental Protection Agency
FR	*Federal Register*
General Permit	1997 NPDES General Permit
HPS	Hunters Point Shipyard
IR	Installation Restoration Site
IRP	Installation Restoration Program
MDL	Method detection limit
MRPP	Monitoring and reporting program plan
Navy	U.S. Department of the Navy
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSDEPP	Non-storm water discharge elimination and prevention program
O&M	Operation and maintenance
OPNAVINST	Operating Naval Instructions
PRC	PRC Environmental Management, Inc.
QA/QC	Quality assurance and quality control
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SWDMP	Storm water discharge management plan
SWPPP	Storm water pollution prevention plan
SWRCB	California State Water Resources Control Board
Tetra Tech	Tetra Tech EM Inc.
UCSF	University of California, San Francisco

1.0 INTRODUCTION

Tetra Tech EM Inc. (Tetra Tech) developed this storm water discharge management plan (SWDMP) to meet substantive regulatory requirements for storm water discharges to San Francisco Bay (Bay) from the inactive Industrial Landfill (hereafter referred to as the "Landfill") in Installation Restoration Site (IR)-01/21 at Parcel E-2 of Hunters Point Shipyard (HPS) in San Francisco, California. This SWDMP was prepared for the U.S. Department of the Navy (Navy), Base Realignment and Closure, Program Management Office West.

The SWDMP for the Landfill has been prepared to meet (1) the substantive requirements of the 1997 National Pollutant Discharge Elimination System (NPDES) General Permit (General Permit), and (2) the HPS basewide SWDMP (LawCrandall 2001). This SWDMP for Parcel E-2 is specific to the Landfill, although some of the storm water runoff from the landfill discharges into the HPS storm water system addressed by the basewide SWDMP. The original HPS basewide SWDMP was finalized in 1994; however, it was updated to reflect changes in both operations at HPS and changes to the General Permit (LawCrandall 2001). The General Permit is being updated and should be finalized by May 2005.

The original SWDMP for the Landfill was issued in June 2003 (Tetra Tech 2003b). As discussed in the following sections, the General Permit requires that the monitoring program be revised whenever appropriate. The Landfill SWDMP has been revised based on recommendations in the "2003-2004 Annual Report for Storm Water Discharge Management, IR-01/21, Industrial Landfill, Parcel E" (Tetra Tech 2004a). The recommendations in the annual report were based on site observations and changes in site conditions that may affect storm water discharges and were made to clarify the Landfill SWDMP. The recommendations are included in Appendix A.

The Navy developed an operation and maintenance (O&M) plan (Tetra Tech 2003c) for the Landfill concurrently with the SWDMP. Maintenance activities discussed in this SWDMP, such as improving roads, are conducted as part of the routine O&M activities at the Landfill. Inspections conducted under the SWDMP are separate from, but complimentary to, inspections performed under the O&M plan.

1.1 REGULATORY BACKGROUND

In June 1997, the Navy submitted a Notice of Intent (NOI) for the basewide storm water program at HPS. The NOI applies to general industrial activities at Parcels B, C, D, E, and E-2, including the following regulated activities: industrial and commercial machinery and equipment, sporting and athletic goods, trucking (except local), construction equipment, and plaster work. In addition, some private businesses operating at HPS are regulated by the General Permit (Appendix B) and have site-specific storm water pollution prevention plans (SWPPP), as noted in the basewide SWDMP (LawCrandall 2001).

The 1997 NOI does not cover sites under the Installation Restoration Program (IRP), which includes the Landfill in Parcel E-2. Under the IRP, the Navy is performing environmental investigations and cleanup in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The basewide SWDMP complies with the substantive requirements of California State Water Resources Control Board's (SWRCB) Water Quality Order No. 99-08-DWQ under the CERCLA program. The requirements of the order are considered applicable or relevant and appropriate requirements.

In February 2003, the Navy also demonstrated its intent to comply with the General Permit and the basewide SWDMP (LawCrandall 2001) by submitting a NOI for the Landfill to the Regional Water Quality Control Board (RWQCB) (Appendix C), for an SWDMP specifically for the Landfill.

The following sections discuss the federal and California regulations that pertain to storm water discharges.

1.1.1 Federal Regulations

In 1972, the federal Water Pollution Control Act, also referred to as the Clean Water Act (CWA), was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited, unless the discharge complies with a NPDES permit. The 1987 CWA amendments added Section 402(p), which established a framework for regulating municipal and industrial storm water discharges under the NPDES program. On November 16, 1990, the U.S. Environmental Protection Agency (EPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations are published in Title 40 of the *Code of Federal Regulations* (40 CFR) Parts 122, 123, and 124.

Permits for discharge of industrial storm water must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require reducing pollutants in storm water discharges using (1) best available technology (BAT), (2) best conventional pollutant control technology (BCPCT), or (3) more stringent controls necessary to meet water quality standards. EPA regulations in 40 CFR (Subchapter N) establish numeric effluent limitations for storm water discharges from certain designated industrial categories. For these categories, compliance with the effluent limitations constitutes compliance with BAT and BCPCT for the specified pollutants.

Industrial activities that are not identified in the industrial categories in 40 CFR Subchapter N are not required to meet numeric effluent limitations. For these activities to be in compliance, dischargers must develop and implement a site-specific SWPPP that includes best management practices (BMP) to reduce or prevent the discharge of pollutants associated with industrial activities in storm water and authorized non-storm water. Incorporation of BMPs, which may include control of storm water discharges along with reduction of pollutants at the source, constitutes BAT and BCPCT and achieves compliance.

Two types of permits are issued under the NPDES storm water program for industrial facilities at the federal level. One is the "general permit," which provides coverage to numerous facilities within a specific category. The other is the "individual permit," which is tailored for the specific requirements of a particular facility. General permits are intended to cover most industrial facilities within a specific geographical area such as a city, county, or state. EPA has developed general permits for its regions and as models for the states. Under a general permit, all storm water dischargers are subject to the same basic permit conditions, although the permit could impose additional requirements for certain industries.

Federal regulations allow authorized states to issue general permits or individual permits to regulate industrial storm water discharges. Under the CWA, a state's NPDES programs must be no less stringent than EPA's programs.

1.1.2 California Regulations

EPA has delegated the authority to California to administer the NPDES program throughout the state in the same manner that EPA's regional offices administer the program in nondelegated states. California may also issue general permits for categories of dischargers. The SWRCB and its nine RWQCBs, created and empowered under the Porter-Cologne Water Quality Control Act, are responsible for administering the NPDES program in California.

The SWRCB, pursuant to the federal regulations, has issued a statewide general permit that applies to all industrial storm water discharges that require a permit except for construction activity. The California General Industrial Activities Storm Water Permit was issued as General Permit No. CAS000001 on November 19, 1991, and was amended on September 17, 1992. A new General Permit was issued on April 17, 1997 (Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities), which modified many of the original requirements. Appendix B of this SWDMP contains a copy of the General Permit.

1.1.3 General Permit Provisions

The General Permit requires all facility operators to comply with the following provisions:

- Discharge Prohibitions
  - Discharges of materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.
  - Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

- Effluent Limitations
  - Storm water discharges from facilities subject to storm water effluent limitation guidelines in federal regulations (40 CFR Subchapter N) shall not exceed the specified effluent limitations.
  - Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 or 40 CFR Part 302.
  - Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCPCT for conventional pollutants. Development and implementation of a SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT and BCPCT constitutes compliance with this requirement.

- Receiving Water Limitations
  - Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely affect human health or the environment.
  - Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable RWQCB's Basin Plan. A facility operator will not be in violation of this receiving water limitation as long as the facility operator has implemented BMPs that achieve BAT and BCPCT and the procedure below is followed.

    The facility operator shall submit a report to the appropriate RWQCB that describes the BMPs that are currently being implemented and the additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The RWQCB may require modifications to the report.
  - Following approval of the report described previously by the RWQCB, the facility operator shall revise its SWPPP and monitoring program to incorporate (1) the additional BMPs that have been and will be implemented, (2) the implementation schedule, and (3) any additional monitoring required.

Other Applicable Water Quality Standards for Receiving Waters

The SWRCB adopted the California Ocean Plan on March 22, 1990. In April 1991, the SWRCB adopted two water quality control plans (the Inland Surface Water Plan and the Enclosed Bays and Estuaries Plan) that included numeric water quality criteria for priority toxic pollutants. These Basin Plans were rescinded when a lawsuit was brought by several dischargers that successfully challenged how the plans were adopted. As a result of that action, California has been without water quality standards for most priority pollutants since 1994 for inland surface waters, enclosed bays, and estuaries, as required by Section 303(c)(2)(B) of the CWA. In May

2000, the EPA under the authority of the CWA promulgated the California Toxics Rule, which established water quality criteria for priority pollutants for inland surface water, enclosed bays, and estuaries of California. These promulgated criteria, together with California-adopted designated uses in the above-mentioned Basin Plans, create water quality standards for those California waters.

1.1.4 Meeting the General Permit Provisions

To meet the General Permit provisions, dischargers need to complete the following compliance actions:

- File the NOI form
- Eliminate unauthorized non-storm water discharges (including illicit connections) to the storm water conveyance systems
- Develop, implement, and revise the SWPPP to be appropriate for site conditions
- Conduct annual site compliance evaluations
- Develop, implement, and revise a monitoring program
- Perform visual observations of storm water and non-storm water discharges
- Determine BMP effectiveness and discharge compliance under the monitoring program
- Maintain records for a minimum of 5 years
- Certify compliance
- Submit annual reports
- File a Notice of Termination (NOT) to terminate coverage

1.2 COMPLIANCE ACTIONS

The following sections discuss the compliance actions necessary to meet the requirements of the General Permit.

1.2.1 Storm Water Pollution Prevention Plan

The General Permit requires that dischargers develop, retain on site, and implement an SWPPP. The SWPPP has the following two primary objectives:

- Identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility (Section 1.2.1.1)

- Identify and implement site-specific BMPs to reduce or prevent pollutants associated with industrial activities in discharges (Section 1.2.1.2)

The SWPPP should contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings and maps, and relevant copies or references of other plans. The SWPPP should be revised when appropriate.

1.2.1.1 Identify and Evaluate Sources of Pollutants

The SWPPP must include the following items to identify and evaluate the sources of pollutants:

- A detailed site map (General Permit, Section A.4) that shows the following:
  - Facility boundaries and storm water drainage areas within the facility boundaries, including portions of the drainage area impacted by run-on from surrounding areas, the direction of flow of each drainage area, on-site surface water bodies, areas of soil erosion, and nearby water bodies and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received
  - Location of the storm water collection and conveyance system, including associated points of discharge, direction of flow, and any structural control measures such as catch basins, berms, and detention ponds
  - Outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures
  - Locations where materials are directly exposed to precipitation and locations where significant spills or leaks have occurred
  - Areas of industrial activity, including locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage and maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity that are potential pollutant sources

- A list of significant materials (such as raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials) handled and stored at the site (General Permit, Section A.5) that includes descriptions of the following:
  - Locations where the material is being stored, received, shipped, and handled
  - Typical quantities and frequency

- A description and summary of potential pollutant sources (General Permit, Section A.6) that includes the following:
  - Industrial processes
  - Material handling and storage areas
  - Dust and particulate generating activities
  - Significant spills and leaks
  - Non-storm water discharges
  - Soil erosion areas
- An assessment of potential pollutant sources (General Permit, Section A.7) to determine the following:
  - Areas that are likely sources of pollutants in storm water discharges and authorized non-storm water discharges
  - Pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges

1.2.1.2 Identify and Implement Site-Specific BMPs

The SWPPP must provide a description and summary of the BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The descriptions should note whether the BMPs are existing or new and whether each BMP is effective.

The following two types of BMPs exist: non-structural and structural. Nonstructural BMPs include good housekeeping, preventive maintenance, spill response, material handling and storage, employee training, waste handling and recycling, erosion control and site stabilization, inspections, and quality assurance. Structural BMPs include overhead coverage, retention ponds, control devices (such as berms), secondary containment structures, and discharge treatment.

1.2.2 Monitoring Program

The General Permit requires that all facilities develop and implement a monitoring and reporting program plan (MRPP). The MRPP has four objectives:

- Ensure that storm water discharges are in compliance with the discharge prohibitions, effluent limitations, and receiving water limitations specified in the General Permit (see also Section 1.1.3)
- Ensure that BMPs at the facility are evaluated and revised to meet changing conditions

- Aid in the implementation and revision of the SWPPP
- Measure the effectiveness of the BMPs

To meet these objectives, the facility must perform the following actions:

- Quarterly non-storm water discharge visual observations (General Permit, Section B.3)
- Monthly storm water discharge visual observations during the wet season, October 1 through May 31 (General Permit, Section B.4)
- Storm water sampling and analysis during two storm events of each wet season, including the first storm event (General Permit, Section B.5)
- Annual reporting to the RWQCB by July 1 (General Permit, Section B.14)

1.2.3 Record-Keeping

The SWDMP is a public document under Section 308(b) of the CWA. The plan must be retained on site, be maintained, and be made available to employees, the public, and representatives of EPA, SWRCB, RWQCB, or local government, as requested.

Records of visual observations, sampling and analysis procedures and results, annual comprehensive site compliance evaluations, all reports, documentation of BMP implementation, and data pertaining to the General Permit must be retained for a minimum of 5 years from the date of observation, measurement, report, or application. This period may be extended by the SWRCB or RWQCB.

1.2.4 Revisions

The General Permit requires the SWPPP to be revised when changes in industrial activities (1) may significantly increase the quantities of pollutants in storm water discharge, (2) cause a new area at the facility to be exposed to storm water, or (3) would introduce a new pollutant source at the facility. The SWPPP should be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement of this General Permit.

1.2.5 Certifications of Compliance

The General Permit requires that all reports, certifications, or other information required by the General Permit or requested by EPA, SWRCB, RWQCB, or a local storm water management agency shall be signed by a principal executive officer or by a duly authorized representative. A person is a duly authorized representative only if (1) the authorization is made in writing by the

principle executive officer and retained as part of the SWPPP and (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for named position.

The principle executive officer or duly authorized representative is required to make the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

In addition, the General Permit requires that the facility operator comply with the following (General Permit, Section C):

- All conditions of the General Permit and the effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants
- The duty to mitigate any discharge in violation of the General Permit that has a reasonable likelihood of adversely affecting human health or the environment
- The proper operation and maintenance of facilities and systems of treatment and control to achieve compliance with the conditions of the General Permit and the SWPPP
- The duty to provide requested information to the public
- The duty to provide requested information and HPS access to the RWQCB, SWRCB, EPA, and local storm water management agencies
- Notification to the RWQCB, within 14 days, of any noncompliance issues and any anticipated noncompliance issues associated with alterations or additions that could significantly change the nature or increase the quantity of pollutants discharged

The permitted facility must notify the RWQCB of any periods of noncompliance. The notification must be submitted with the annual report and describe the noncompliance and its cause, indicate the period of noncompliance, indicate if the noncompliance has been corrected, include a schedule for the correction, and indicate the corrective measures to reduce or prevent recurrence of the noncompliance.

Noncompliance with the General Permit is a violation of the CWA and the California Porter-Cologne Water Quality Control Act. Any person who violates any General Permit condition is subject to a civil penalty allowed by the Porter-Cologne Water Quality Control Act not to exceed $25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA. Section 309 of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under the General Permit, including reports of compliance or noncompliance, is subject to a fine of not more than $10,000 or by imprisonment for not more than 2 years, or both.

1.2.6 Termination of General Permit Coverage

Dischargers may request to terminate their coverage under the General Permit by filing a NOT with the RWQCB. The NOT will include a basis for termination and a certification that all storm water discharges associated with industrial activities covered under the General Permit have been eliminated. The following actions are required:

- Step 1: As industrial facilities are removed from the operation or closed, the SWDMP will be modified to reflect the changed conditions.
- Step 2: After all industrial facilities are closed, the Activity will be inspected by Activity personnel for potential sources of storm water pollutants. To request termination of coverage by the General Permit, all industrial facilities subject to the regulations must have been terminated, including the exposure of industrial equipment, materials, and waste to storm water. The date on which industrial facilities are terminated and cleanup or closure activities are completed will be recorded by the facility. Request for termination of coverage may also be made if storm water associated with industrial activity no longer discharges to waters of the United States. This would mean that all industrial storm water is retained on site, treated and disposed of with process wastewater, discharged to a municipal sanitary sewer system or municipal combined sewer system, or discharged to evaporation ponds or percolation ponds off site. If ownership or operation of the facility is transferred, then the previous owner or operator must request termination of coverage, and the new owner or operator must submit a NOI and fee for coverage under the General Permit. The date of transfer and information about the new owner or operator will be provided.
- Step 3: A NOT must be filed with the Executive Officer of the RWQCB. The NOT will include a basis for termination and a certification that all storm water discharges associated with industrial activity that are covered by the General Permit have been eliminated.

RWQCB may inspect the Activity before accepting the basis of termination. Appendix C contains a NOT form.

1.3 NAVY STORM WATER PROGRAM

As defined by the Chief of Naval Operations in the Navy's *Environmental and Natural Resources Program Manual* (Operating Naval Instructions [OPNAVINST] 5090.1B), which is the primary guidance for Navy policies and procedures for managing environmental and natural resource programs, the Navy's environmental vision is to be recognized as an environmental leader while effectively executing naval operations. Navy policy with respect to storm water management requires all Commands to assure that all activities comply with storm water management and pollution prevention requirements, as stipulated in permits under which the activities are covered.

To comply with Navy storm water policy, the Navy developed a program for naval activities in its area of responsibility, which includes northern California, to comply with federal and California storm water regulations. The program began in 1992, when the Navy and Marine Corps filed NOIs with the SWRCB to gain coverage for specific naval activities under California's General Permit.

The original SWDMPs for many Navy activities were completed in 1993. The Navy SWDMP is a complete and comprehensive compliance document, developed to meet the California requirements described above. The SWDMP establishes policy, responsibilities, procedures, and technical guidance on the prevention and reduction of pollution of storm water runoff from industrial areas. Each Navy SWDMP includes an Activity description, a non-storm water discharge elimination and prevention program (NSDEPP), a SWPPP, and a MRPP.

1.4 STORM WATER DISCHARGE MANAGEMENT PLAN FOR THE INDUSTRIAL LANDFILL

The Navy demonstrated its intent to comply with the General Permit by submitting a NOI and an abbreviated NOI to the SWRCB in February 1995 and June 1997, respectively, for the basewide SWDMP. The basewide storm water program at HPS covers general industrial activities at Parcels B, C, D, E, and E-2 at sites that are not part of the IRP. HPS has complied with the requirements of the General Permit, as reported in each annual report submitted to the RWQCB by July 1 of each year. The original basewide SWDMP for HPS was finalized in August 1994 and has been updated to reflect changes in both operations and the Activity and changes to the General Permit (LawCrandall 2001).

The Navy also demonstrated its intent to comply with the General Permit and the basewide SWDMP (LawCrandall 2001) by submitting a NOI for the Landfill to the RWQCB in 2003 (Appendix C), for an SWDMP specifically for the Landfill.

1.4.1 Organization

This SWDMP is organized into the following six sections:

- Section 1.0, Introduction, describes the federal and state storm water permitting regulations, the Navy storm water program, and the organization of this SWDMP.

- Section 2.0, Requirements for Certifications and Revisions, describes the process to certify and revise the SWDMP when changes in industrial activities may cause or affect storm water discharges.

- Section 3.0, Non-Storm Water Discharge Elimination and Prevention Program, discusses the program to identify and eliminate prohibited and unauthorized non-storm water discharges.

- Section 4.0, Storm Water Pollution Prevention Plan, identifies the potential sources of storm water pollutants at HPS and identifies BMPs for reducing or preventing the discharge of pollutants into storm water runoff.

- Section 5.0, Monitoring and Reporting Program Plan, describes the storm water sampling and analysis, storm water discharge and visual observations, non-storm water discharge visual observations, and the records and reporting requirements.

- Section 6.0, References, lists the sources used to prepare this SWDMP.

Figures and tables follow their first mention in the text of this document. Appendix A contains the recommendations for the SWDMP from the 2003-2004 Annual Report for Storm Water Discharge Management at the Landfill (Tetra Tech 2004a). Appendix B contains the General Permit, and Appendix C contains the NOI and the NOT form. Appendix D provides the illicit connection/non-storm water discharge identification and testing protocol. Appendix E provides instructions for performing non-storm water visual observations. Appendix F provides instructions for performing storm water visual observations. Appendix G provides sampling instructions. Appendix H contains the maintenance activities form. Appendix I provides the quality assurance/quality control (QA/QC) guidance document plan. Appendix J contains the BMPs. Appendix K provides the instructions to perform the annual comprehensive site compliance evaluation. Appendix L provides the SWRCB annual report form. Appendix M provides general specifications for installing fiber rolls and silt fences. Appendix N contains the responses to regulatory agency comments on the draft SWDMP dated January 7, 2003 (Tetra Tech 2003a). Appendix O contains the responses to regulatory agency comments on the draft SWDMP, Revision 1, dated September 30, 2004 (Tetra Tech 2004b).

1.4.2 Terminology

The following terms are commonly used throughout this SWDMP:

- "Facility" and "industrial facility" refer to a collection of industrial processes that discharge storm water associated with industrial activity within the property boundary or operational unit.

- "Significant quantities" refers to the volume, concentrations, or mass of a pollutant that can cause or threaten to (1) cause pollution, contamination, or nuisance; (2) adversely affect human health or the environment; or (3) cause or contribute to a violation of any applicable water quality standards for the receiving water.

- "Significant spills" refers, but is not limited, to releases of oil or hazardous substances that exceed reportable quantities under Section 311 of the CWA (see 40 CFR 110.10) or Section 102 of CERCLA (see 40 CFR 302.4).

- The term "Activity" is used in this SWDMP to indicate an entire Navy or Marine Corps base or group of Navy or Marine Corps activities covered by the NOI. One Activity, therefore, may include many industrial facilities that are covered by the SWDMP.

1.4.3 Revision of the Storm Water Discharge Management Plan

The Navy will revise the SWDMP when changes occur that (1) may significantly increase the quantities of pollutants in the storm water discharge, (2) cause a new area of industrial activity at the site to be exposed to storm water, or (3) would introduce a new pollutant source at the site.

1.4.4 Annual Report

The Activity will submit an annual report that includes (1) a summary and evaluation of visual observations and sampling results, (2) laboratory reports, (3) the annual comprehensive site compliance evaluation report, (4) explanations of why the Activity did not implement any tasks required by the General Permit, and (5) records specified under the monitoring program requirements (Section 5.5). The annual report must also be signed and certified in the same manner as this SWDMP (described in Section 2.1).

2.0 REQUREMENTS FOR CERTIFICATION AND REVISION

This section discusses the requirements under the General Permit for certification and revision.

2.1 CERTIFICATION

To meet the certification requirements of the General Permit, this SWDMP includes a Certification of Compliance form that will be signed by the duly authorized representative of the Commanding Officer. The form is provided on the following page (Figure 1).

FIGURE 1

CERTIFICATION OF COMPLIANCE

I certify under penalty of law that I personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature: _____

Name: _____

Title: _____

Date: February 1, 2005

A person is a duly authorized representative only if the following two conditions are met:

- Authorization is made in writing and retained as part of the SWDMP
- Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or site such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for HPS. Therefore, a duly authorized representative may be either a named individual or any individual occupying a named position

2.2 REVISIONS

The General Permit requires that the SWDMP be revised when changes occur that (1) may significantly increase the quantities of pollutants in the storm water discharge, (2) cause a new area of industrial activity at the site to be exposed to storm water, or (3) would introduce a new pollutant source at the site. The plan must also be revised whenever its provisions or requirements are in violation of any condition of the General Permit or it has not achieved the general objectives of controlling pollutants in the storm water discharges. The plan shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the plan is in violation of any requirements of the General Permit. When any part of the plan is infeasible to implement within 90 days because of proposed significant structural changes, the facility operator shall submit a report to the RWQCB before the applicable deadline that provides the following:

- A description of the portion of the plan that is infeasible to implement by the deadline
- Justification for a time extension
- A schedule for completing and implementing that portion of the plan
- A description of the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges

Facility operators shall provide written notification to the RWQCB within 14 days after revisions are implemented.

3.0 NON-STORM WATER DISCHARGE ELIMINATION AND PREVENTION PROGRAM

One of the major elements of the SWPPP is the elimination of unauthorized non-storm water discharges. The NSDEPP is separated from the SWPPP for ease of use. This section discusses how this plan meets the General Permit's requirements for an NSDEPP.

3.1 INTRODUCTION

Non-storm water discharges entering the facility's storm drain system from illicit connections and illegal dumping can contribute a significant pollutant load to receiving waters. The purpose of the NSDEPP is to identify, eliminate, and prevent unauthorized non-storm water discharges from entering the storm drain system.

3.2 POLICY AND RESPONSIBILITIES

The General Permit authorizes the following non-storm water discharges under specific conditions:

- Fire hydrant flushing
- Potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems
- Drinking fountain water
- Atmospheric condensates, including refrigeration, air conditioning, and compressor condensate
- Irrigation drainage
- Landscape watering
- Springs
- Groundwater
- Foundation or footing drainage
- Seawater infiltration where the sea waters are discharged back into the seawater source

These discharges are authorized if all the following conditions are met:

- Discharges are in compliance with RWQCB requirements
- Discharges are in compliance with local agency ordinances and requirements
- BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges

- Discharges do not contain significant quantities of pollutants
- Monitoring programs include quarterly visual observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective
- Discharges are reported and described in the annual report

The only non-storm water discharge expected at the site is from irrigation (of the landfill cap) and does not pose a threat to storm water quality.

3.3 IDENTIFICATION OF NON-STORM WATER DISCHARGES

To eliminate and prevent unauthorized non-storm water discharges, the presence and location of any discharge source must first be determined. Non-storm water discharges are identified by conducting a basewide visual field survey and physical investigation of the storm drain system. In 1996, a storm drain survey of the lines beneath IR-01/21 was performed (International Technology Corporation 1999). The survey determined that the lines were intact and in sound condition and there was only minimal sediment load.

Appendix D discusses the methodologies and includes associated forms for documentation of the procedures for determining prohibited non-storm water discharges. These methodologies are used to perform the tasks below.

- Identify the presence of prohibited non-storm water discharges at Activity outfalls.
- Locate illicit connections to the storm drain system.
- Provide information needed for the development of OPNAVINST 11010.20E, Part 2 – Preparation and Submission of Special Project Step Two Documentation, for projects requiring significant structural modifications to eliminate illicit connections, including the engineering and detailed cost data necessary to define and justify the work to be accomplished.

3.3.1 Visual Observations

The first step to identify non-storm water discharges and their sources is visually observing the storm drain system. Because an organized approach is needed to identify non-storm water discharges, instructions for conducting the visual observations are provided in Appendix E.

The initial HPS basewide SWPPP (PRC Environmental Management, Inc. [PRC] and Montgomery Watson 1994) contained appendices addressing an illicit discharge prevention program that was part of the SWPPP. The results of the illicit discharge survey, which included field surveys, did not identify any illicit connections at IR-01/21. Additionally, quarterly visual

observations of non-storm water discharges are required by the General Permit. The protocol for these observations is presented in Appendix E. Results of the observations are described in the annual reports, as discussed in Section 5.0 of this plan.

3.3.2 Illicit Connection Testing

Physical investigations of the storm drain system may include dyed-water trace testing, smoke testing, and video-camera inspection of manholes, catch basins, and pipelines. One or more of these tests should identify the source of a non-storm water discharge from an illicit connection.

Based on visual inspections presented in annual reports, no illicit connections have been found at the Landfill to date.

3.4 Elimination and Prevention of Non-Storm Water Discharges

Based on annual reports, the NSDEPP is being implemented and its provisions are being substantially accomplished. Elimination and prevention of non-storm water discharges are continuing concerns at industrial facilities. Because new construction, new activities, and changed activities are ongoing at the Activity, provisions of the NSDEPP are also ongoing. The program now emphasizes ongoing and new requirements of the General Permit to inspect, report, and eliminate new sources that may occur.

3.4.1 Review of Project Plans and Specifications

The most effective technique to control illicit connections to the storm drain system is for experienced staff to incorporate illicit connection prevention into new construction, repair, or modification projects during the design phase. To control illicit connections, personnel experienced in piping design, routing, and illicit connection hookups will provide technical review for plans and specifications associated with the constructions of new facilities and repair or modification of existing facilities.

3.4.2 Maintenance Activities

In addition to BMPs employed by Activity personnel, proper and routine maintenance of the storm drain system will help minimize the entry of non-storm water discharges. Storm drains may fill up with sediment and become clogged over time. Drainage swales may erode, thereby becoming a source of sediment pollution to storm water. In addition, leaking sanitary sewer piping may cause infiltration and contamination of the storm drain system.

The General Permit requires a preventative maintenance program that includes the inspection and maintenance of the storm drain system. Also required is the inspection and testing of equipment and systems that could fail and result in the discharge of pollutants to the storm drains. Preventive maintenance should be performed regularly and should include inspection, cleaning, and repair of the following:

- Aboveground storage tanks and underground storage tanks
- Manholes and catch basins
- Detention ponds
- Oil/water separators
- Outfall pipes
- Drainage swales
- Roofs and siding
- Site drainage weirs and shut-off valves

Cleaning and removing sediment deposits are necessary maintenance actions to ensure proper functioning of the storm drain system. Cleaning should occur just before the wet season to remove sediment and debris accumulated during the summer. An accurate log should be kept for the area of the storm drain piping cleaned, manholes and catch basins cleaned, and the amount of waste collected. This log can be used to identify areas that require more frequent cleaning and implementation of BMPs.

Inspections should also be recorded. Signs of corrosion, erosion, and scaling, as well as overall structural integrity, should be noted, and corrective measures should be recommended for implementation. Inspections should be assigned to a set schedule. Quarterly inspections are recommended; however, a more suitable frequency may be implemented depending on the specific needs of the storm drain system. Inspection personnel should be provided a site plan showing the locations of all storm water drainage systems to be inspected. Inadequate or infrequent inspections should be avoided because they could result in increased cleaning and repair costs and may lead to permit violations. Appendix H provides a form to record information about maintenance activities.

3.4.3 Recommended Preventive Measures

Activity operations and maintenance staff will implement the following preventive measures to prevent prohibited non-storm water discharges to the storm drain system:

- Design engineers will incorporate illicit connection prevention into new construction, repair, or modification during the project design phase. Additionally, field engineers and construction teams will confirm proper design before construction begins.

- Sinks will be connected to the sanitary sewer or other disposal locations. "As-builts," piping diagrams, and building or site plans will be inspected to verify that the sinks are not connected to the storm drain system. Additional reconnaissance may be performed to identify plumbing changes not shown on available plans. If an illicit connection to the storm drain system is suspected, additional testing, as outlined in Appendix D, will be performed.

- Unknown materials may be present in prohibited non-storm water discharges resulting from improper disposal of wastes or illicit connections to the storm drain system. Adequate reporting procedures will be developed and made available to personnel who may observe either illegal dumping or a prohibited non-storm water discharge. Information about reporting procedures will be posted in all industrial facilities, and an individual or team will be designated to respond to such reports.

3.4.4 Training for Non-Storm Water Discharge Elimination and Prevention Program Users

Training of personnel is essential to an effective NSDEPP. Personnel must be able to locate and identify non-storm water discharges and illicit connections and be familiar with methods to prevent and eliminate these discharges and connections. Training related to the effective management of petroleum and hazardous substances enables personnel to easily identify those conditions that may cause prohibited non-storm water discharges.

Personnel training should be based on four objectives:

1. Promote a clear identification and understanding of the problem, including facilities with the potential to pollute storm water and the regulations enforcing compliance

2. Identify corrections

3. Promote personal ownership of the problems and the solutions

4. Integrate personnel feedback into training and implementation

Instructors should have training and experience in illicit connection identification and prevention. Instructors should also possess a basic understanding of pipe design and pipe rerouting and knowledge of pertinent plumbing codes. Additionally, instructors should have a thorough understanding of BMPs, including their application and implementation.

Training should contain the following:

- Overview of environmental regulations, with emphasis on provisions of the General Permit and its requirements for illicit connection elimination

- Illicit connection identification

- Review and history of the Landfill and the different piping and drain systems (storm water and sanitary sewer)
- Instructions on illicit connection elimination, including pipe retrofitting, capping, and elimination
- Instructions on proper and consistent methods for disposal

Training about illicit connection prevention and prohibited non-storm water discharge prevention can be integrated with existing training programs that may be required by other regulations such as the following:

- Hazardous Waste Operations and Emergency Response Standard (Title 29 of the CFR 1910.120)
- Spill Prevention, Control, and Countermeasures Plan (40 CFR 112)
- Hazardous Materials Management Plan, also known as the Business Plan (*California Health and Safety Code*, Section 6.95)

Proper communication, along with trained personnel, will assist in preventing illicit connections and prohibited non-storm water discharges.

4.0 STORM WATER POLLUTION PREVENTION PLAN

This section describes how this SWDMP meets the requirements for a SWPPP and identifies the BMPs to be used at the Landfill.

4.1 INTRODUCTION

The General Permit requires the development and implementation of an SWPPP. The requirements of the SWPPP are listed below.

- A detailed site map with relevant information
- A list of significant materials handled and stored at the facility that includes the location where the material is stored, received, shipped and handled, and typical quantities and frequency
- A description of potential pollution sources, including industrial processes, material handling and storage activities, dust and particulate generating activities, spills and leaks, non-storm water discharges, and areas of soil erosion

- An assessment of each potential pollutant source to identify areas that are possible sources of pollutants in storm water discharges and authorized non-storm water discharges
- Implementation of BMPs or other control measures to reduce pollutants in storm water discharges
- Designation of personnel responsible for the implementing and maintaining the SWPPP
- Elimination of all unauthorized non-storm water discharges
- Implementation of a plan to communicate the SWPPP requirements to responsible personnel
- An annual site compliance evaluation to identify the need for any revisions to the plan

This SWPPP for the Landfill in Parcel E-2 focuses on the area around the Landfill as a potential source of storm water pollutants. Industrial activities do not currently occur at this site; therefore, soil erosion and sedimentation control are the primary concerns. Any other industrial facilities located on or near the Landfill and outside of Parcel E-2 are addressed in the basewide SWDMP for HPS.

4.1.1 Objectives

The SWPPP has the following two primary objectives:

1. To identify and evaluate pollutant sources associated with the Landfill that may affect the quality of storm water discharges and authorized non-storm water discharges
2. To identify and implement site-specific BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges

4.1.2 Incorporation by Reference

Some of the specific information required by the General Permit is included in a variety of documents that have been developed by the Navy to comply with other regulatory, governmental, and operational requirements. The General Permit allows this information to be incorporated by reference. Specifically, the General Permit's Subsection 3.b of Section A, Storm Water Pollution Prevention Plan Requirements, reads as follows:

"b. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit."

Figure 2 summarizes (in bold italics) the General Permit SWPPP requirements that have been incorporated from the following documents and programs:

- "Storm Water Pollution Prevention Plan, Naval Facilities Engineering Command, Western Division, Hunters Point Annex, San Francisco, California" (PRC and Montgomery Watson 1994)
- "Storm Water Discharge Management Plan Update, Hunters Point Shipyard, San Francisco, California" (LawCrandall 2001)
- IRP
- Superfund Amendment and Reauthorization Act (SARA) Title 3, Emergency Planning and Community Right-to-Know Act, August 1993
- "Final O&M Plan, IR-01/21, Industrial Landfill, Parcel E, Hunters Point Shipyard, San Francisco, California" (Tetra Tech 2003c)

Other requirements of the General Permit are addressed in this plan.

4.1.3 Organization

The SWPPP for the Landfill is organized into five sections. The sections supplement the documents incorporated by reference. Together they meet the SWPPP requirements of the General Permit. Section 4.1, Introduction, states the objectives of the SWPPP and describes the organization. Section 4.2, Parcel E-2 and Landfill Description, describes the location, drainage and topography, historical and current land uses, and industrial facilities of the Landfill in Parcel E-2. Section 4.3, Landfill Storm Water Pollution Prevention Plan, describes the site's industrial activities, associated potential pollutant sources, potential storm water pollutants, and associated BMPs. Section 4.4, Annual Comprehensive Site Compliance Evaluation, discusses the purpose and the protocol for completing this evaluation. Section 4.5, Personnel Training, discusses training of personnel to implement the SWPPP.

FIGURE 2
GENERAL PERMIT SWPPP REQUIREMENTS
(bold italics items are incorporated by reference)

A.4. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8 ½ X 11 inch or larger sheet and include notes, legends, and other data as appropriate to assure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps. The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; direction of flow of each drainage area; on-site surface water bodies; and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, ***authorized non-storm water discharges,*** and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

A.5. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

A.6. Description of Potential Pollutant Sources

a. ***The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above,*** associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302). The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventive measures taken to assure spills or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system. All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

4.2 PARCEL E-2 AND LANDFILL DESCRIPTION

The location, surface drainage, topography, historical and current land uses, and industrial facilities at the Landfill in Parcel E-2 are discussed in the following sections.

4.2.1 Location

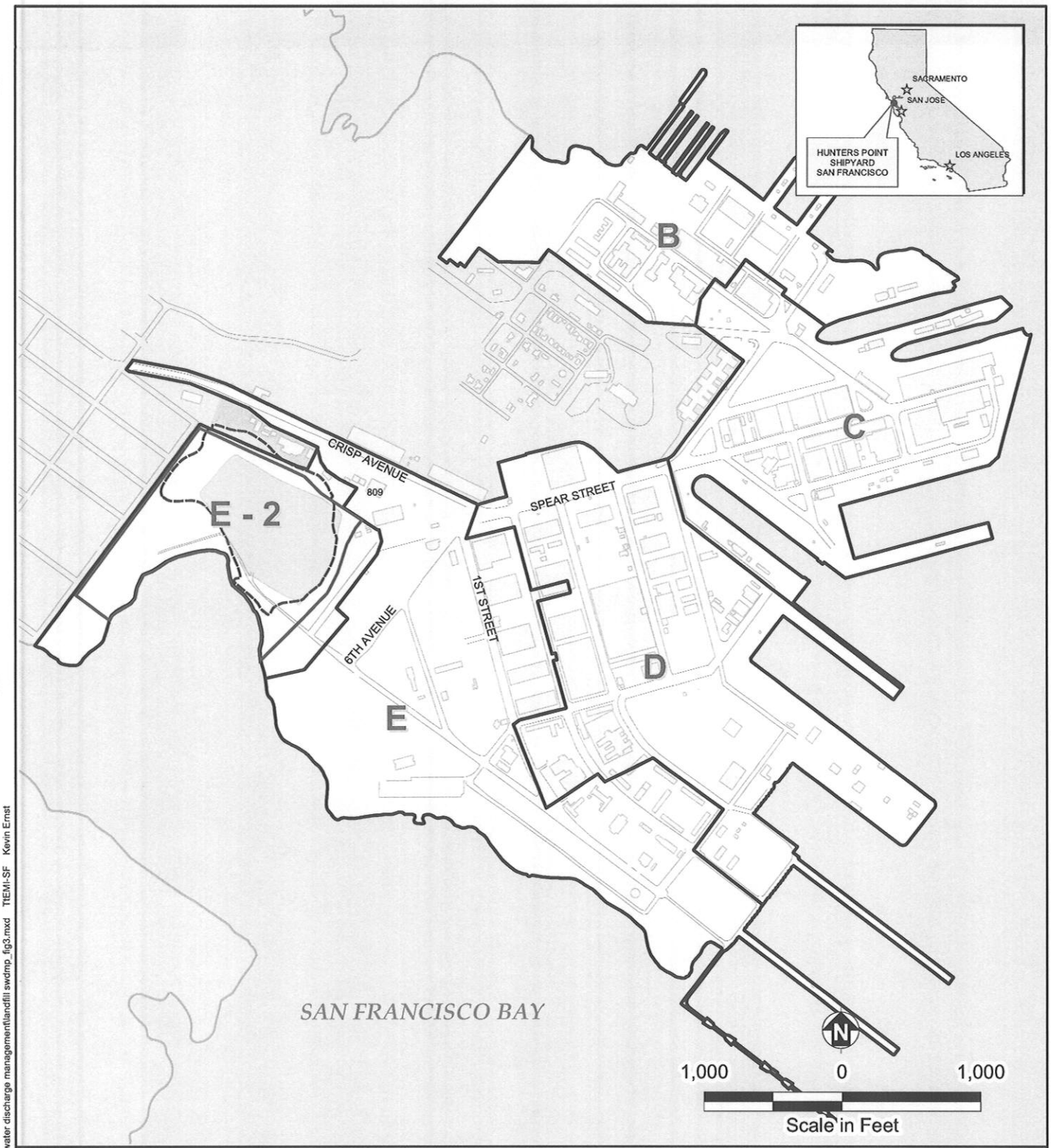
Parcel E-2 and the Landfill are located at the western end of HPS. HPS is located in southeast San Francisco, adjacent to the Bay. Figure 3 shows the vicinity of HPS and the location of Parcel E-2 and the Landfill at HPS. Parcel E-2 consists of 48.2 acres of the original Parcel E land area where the Landfill and adjacent areas are located. Parcel E-2 is bounded by Parcel A and property owned by the University of California, San Francisco (UCSF) to the north; portions of Parcels D and E to the east; intertidal shoreline areas along the Bay to the south; and off-base property to the west. The Landfill is 22 acres and covers the eastern portion of IR-01/21, which is 35 acres (Tetra Tech 2004c). The Landfill area is not used for any industrial activity.

4.2.2 Drainage and Topography

Parcel E-2 is entirely unpaved land and contains no buildings. The southwestern portion of Parcel E-2 is dominated by low-lying freshwater seasonal wetlands. Storm water discharge from the site is controlled on the west side by constructed drainage channels that discharge indirectly to the Bay through the low-lying freshwater seasonal wetlands. In the southeastern portion of the site, runoff flows into the Bay. In the northeastern portion of the site, runoff drains into the existing storm water sewer system that discharges at Outfall 33 located at the southern end of Parcel E. Figure 4 shows the topography and drainage patterns of the site.

The landfill cap encompasses about 14.8 acres and except at the edges, gently slopes inward toward a central riprap-lined drainage swale. Edges of the cap slope outward toward the surrounding landscape. The surface of the cap is vegetated. The surface elevations of the cap range from a high of 30 feet above mean sea level to an average of 15 feet above mean sea level around the edges. The drainage swale crosses the cap in a north-northeast to south-southwest trend and drains to the southwest toward the Bay. The cap also contains a subsurface drainage layer that drains into a 4-inch-diameter corrugated and perforated drainpipe that sits in a 1-by-1-foot trench. Water sources to the cap include rain that falls directly on the cap and water supplied by the irrigation system. The Navy installed about 5,000 feet of gravel road in October 2003 to replace existing dirt roads adjacent to the cap and in expected high-traffic areas (Figure 4).

North of the cap, the topography slopes downward from the edge of the cap toward the north-northeast, in the direction of the UCSF compound. Water sources in this area include rain that falls on the area and storm water that drains from the parking lot within the UCSF compound. Storm water previously drained from the parking area onto the Landfill area. As a result, the Navy installed an underground drainage system to prevent the flow of storm water from the parking area onto unpaved areas near the Landfill. This system also collects surface drainage from a swale along the northeastern fence line into the catch basin. The swale collects the northeasterly flow of storm water from a small area north of the landfill cap.



Parcel Boundary
Installation Restoration Site 01/21 (IR-01/21)
Building
Extent of Landfill Waste
Limit of Landfill Cap
Non-Navy Property
University of California, San Francisco (UCSF) Compound
Road

Tetra Tech EM Inc.

Hunters Point Shipyard, San Francisco, California
U.S. Department of the Navy, BRAC PMO West, San Diego, California

FIGURE 3
LOCATION MAP
Final (Revision I)
Storm Water Discharge Management Plan
Industrial Landfill, Parcel E-2

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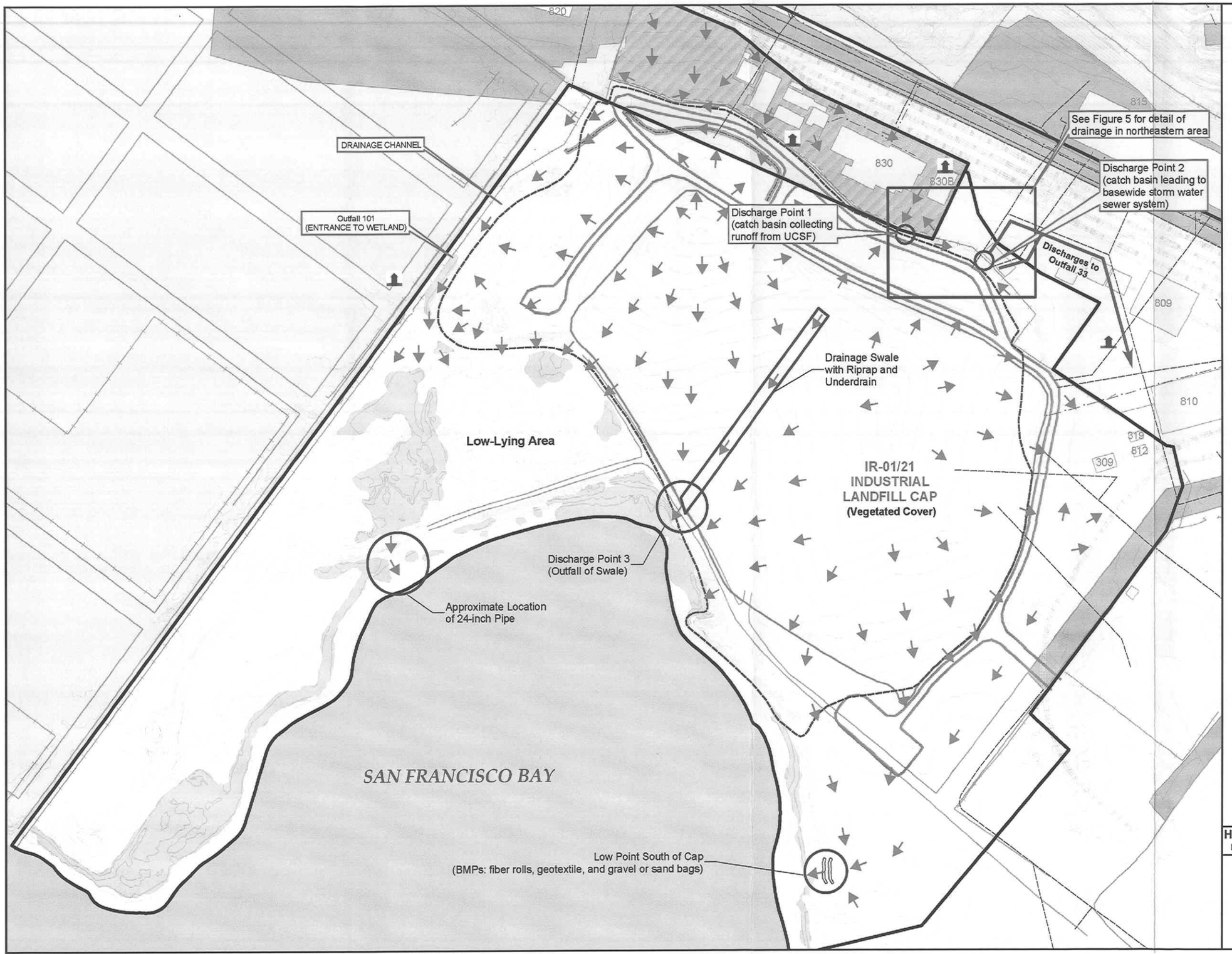

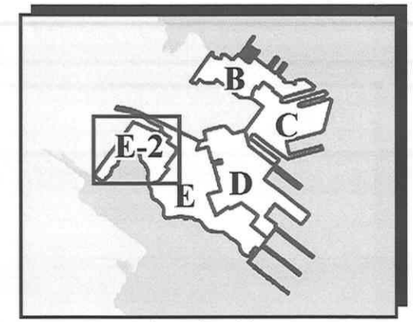

Location Map

- Surface Flow Direction
- Parcel Boundary
- Non-Navy Property
- Fiber Roll
- Wetlands Surveyed in October 2001
- Paved Surface
- Building
- Extent of Landfill Debris
- Limit of Landfill Cap
- Ditch Northwest of Cap
- Storm Line
- Sanitary Sewer
- Gravel Road
- Ground Surface Elevation (1-foot interval)
- Fence
- Road
- Rail Line
- Fire Hydrant
- University of California, San Francisco (UCSF) Compound
- Features of Interest

Notes:
BMP Best management practice
IR Installation Restoration

N

200 0 200

Scale in Feet

Tetra Tech EM Inc.

Hunters Point Shipyard, San Francisco, California
U.S. Department of the Navy, BRAC PMO West, San Diego, California

FIGURE 4
DRAINAGE PATTERNS AND BMPs AT PARCEL E-2
Final (Revision I)
Storm Water Discharge Management Plan
Industrial Landfill, Parcel E-2

2005-01-25 V:\Hunters Point\Projects\Landfill\storm water discharge management\landfill swdmp_fig4.mxd TtEMI-SF Kevin Ernst

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The system consists of two catch basins and a 112-foot-long, 12-inch-diameter buried polyvinyl chloride pipe that directs storm water runoff into an existing storm sewer system that discharges at Outfall 33 (Figure 5). In addition, the Navy installed gravel bags and a 4-by-4-foot square silt fence around the catch basins as a temporary sediment control measure while vegetation in the area became established. Appendix M describes the silt fence.

In 2002, erosion potential existed in areas north and northwest of the cap after recent construction activities associated with installation of the landfill gas control system. Therefore, the Navy seeded large areas (greater than 20 square feet) of exposed soil north and west of the cap. In addition, the Navy seeded the drainage ditch located northwest of the cap, which was installed during construction of the landfill gas control system. Erosion control matting was also installed in the ditches to assist in growing vegetation in concentrated flow areas. In 2004, vegetation is now well established across the site as a result of seeding.

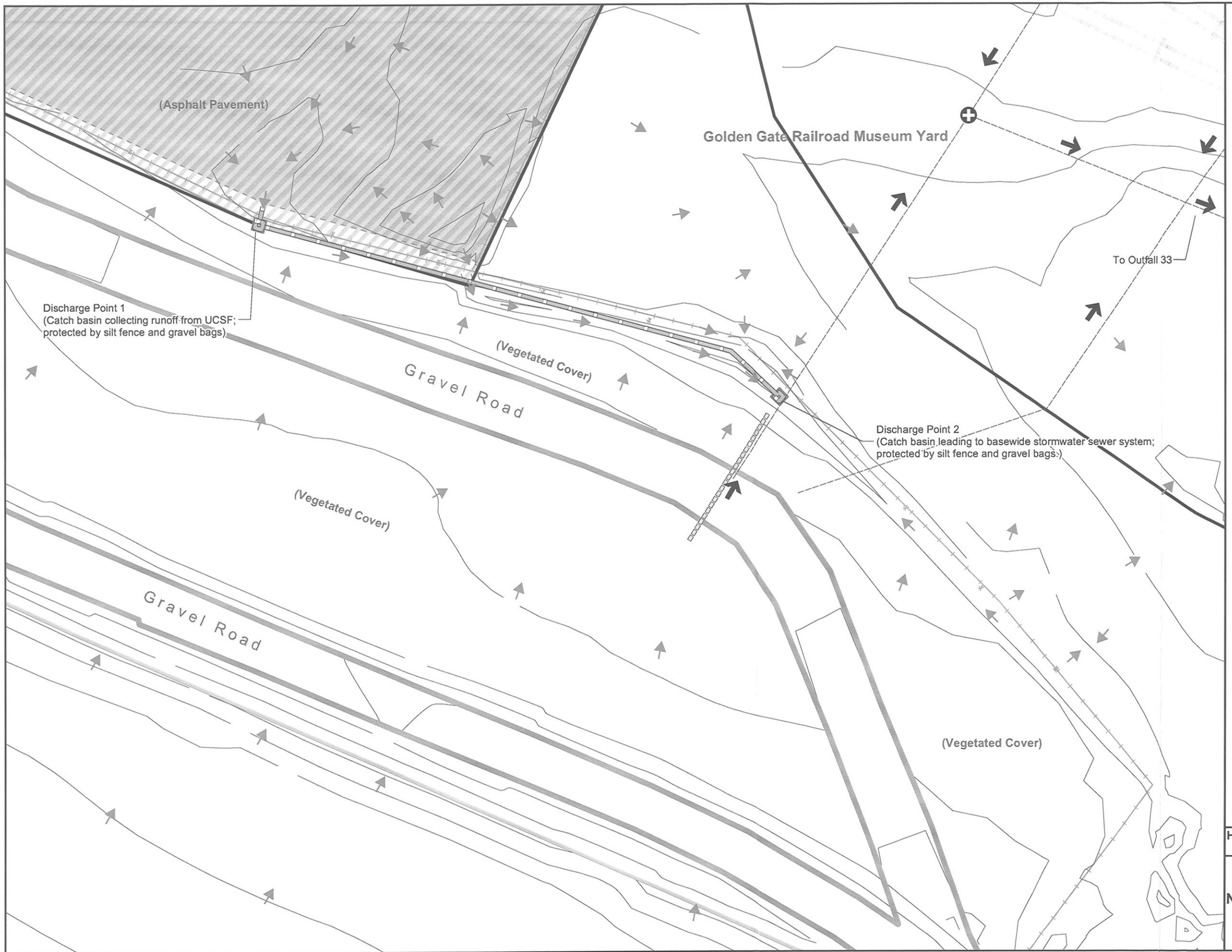
West of the cap, surface water flows to the southwest into a ditch along the western property line, which discharges into a low-lying freshwater seasonal wetland. Surface water eventually discharges into the Bay via a 24-inch pipe through the dike at the edge of the wetland (Figure 4). Water sources in this area include rain that falls on the area and storm water that drains from the area northwest of the cap through a newly constructed drainage ditch that ties into the existing western drainage ditch. In the area south and southeast of the cap, the topography slopes to the south and southwest from the landfill cap toward the Bay. Near the shoreline, the ground surface slopes steeply down to the intertidal zone. This slope is covered with riprap and is vegetated with shrubs and herbaceous plants. The only source of storm water in this area is rain that falls on the area.

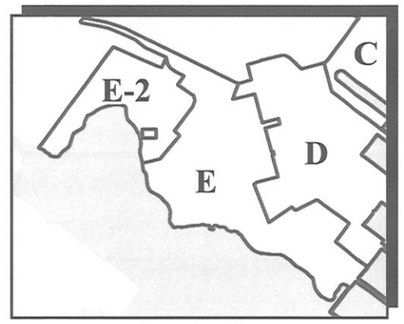
4.2.3 Historical and Current Land Uses

From 1958 to 1974, the Navy operated HPS as a ship repair and maintenance facility; the Navy deactivated HPS in 1974. From 1976 to 1986, the Navy leased HPS to a private ship repair company, Triple A Machine Shop, Inc. In 1986, Triple A Machine Shop, Inc. ceased operations at HPS, and the Navy resumed occupancy of HPS. In 1991, HPS was slated for closure under the Defense Base Closure and Realignment Act of 1990. The shipyard was then divided into Parcels A through F to facilitate environmental investigation and cleanup. In 2004, Parcel E was subdivided into Parcels E and E-2.

The Landfill at Parcel E-2 is in an industrial area, and no residences are in this area of Parcel E-2. The area was filled with artificial fill beginning in the 1940s, after which it was predominantly used to dispose of shipyard wastes. The Landfill has been inactive since 1974 and was capped at that time with clean fill.

In March 2001, a portion of the Landfill was recapped with a multilayer interim cover system as the result of a brush fire on the existing cap in August 2000. Heat from the brush fire caused some subsurface smoldering. The interim cap placed over the Landfill cut off the oxygen supply. As a result, any smoldering was effectively smothered. No evidence exists that the buried landfill materials were ignited by the brushfire.





Location Map

- Pipe Flow Direction
- Surface Flow Direction
- Underground Drain Pipe
- Silt Fence and Gravel Bag
- Limit of Landfill Cap
- Ground Surface Elevation (1-foot interval)
- Gravel Road
- Fence
- Parcel Boundary
- Rail Line
- Manhole
- Paved Surface
- Storm Line
- University of California, San Francisco (UCSF) Compound
- Drain Pipe Under Road

N

30 0 30

Scale in Feet

Tetra Tech EM Inc.

Hunters Point Shipyard, San Francisco, California
U.S. Department of the Navy, BRAC PMO West, San Diego, California

FIGURE 5
DRAINAGE SYSTEM FOR NORTHEASTERN AREA OF PARCEL E-2
Final (Revision I)
Storm Water Discharge Management Plan
Industrial Landfill, Parcel E-2

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In the spring of 2002, as part of the additional tasks identified during the remedial investigation to fill data gaps, landfill gas was found to be migrating off site onto the UCSF compound north of the Landfill (Tetra Tech 2002b). In October 2002, the Navy constructed a landfill gas control system to reduce concentrations of landfill gas found below the UCSF compound and to stop future migration of landfill gas to the UCSF compound. During installation of the gas control system, several drainage improvements were made in the area north of the multilayer cap.

4.2.4 Industrial Facilities Descriptions

The industrial facility categories adjacent to the Landfill are as follows:

- Materials storage
- Repair and maintenance (general)

The storm water discharges from these surrounding industrial facilities are discussed under the basewide SWDMP.

4.3 LANDFILL STORM WATER POLLUTION PREVENTION PLAN

The General Permit requires that the SWDMP include descriptions of potential pollutant sources and potential pollutants. This section provides a detailed discussion of the potential pollutant sources and potential pollutants at the Landfill.

4.3.1 Material Loading, Unloading, and Access Areas

The landfill contains the following primary material loading and unloading and access areas:

- Material Loading and Unloading Areas: There is no loading or unloading of materials at IR-01/21. Material loading and unloading occurs at surrounding facilities, which have been designated loading areas; these areas are described in the basewide SWPPP.
- Entrances and Exits to HPS: HPS can be accessed (1) at all times from the main security gate located in the northwestern portion of the base, just south of Parcel B, and (2) only with the consent of the Caretaker Site Office from the locked gate located at the northern end of Parcel E-2 along Crisp Avenue. IR-01/21 can be accessed from a locked gated located at the intersection of Crisp Avenue, Spear Street, and 1st Street. Access points at HPS include ship berthing areas and vehicle access gates.

4.3.2 Methods of On-Site Storage and Disposal of Significant Materials

There is no on-site storage or disposal of significant materials (see definition in Section 4.3.5) at Parcel E-2.

4.3.3 Outdoor Activities

Regularly scheduled outdoor activities that occur at Parcel E-2 include sampling and inspections.

4.3.4 Authorized Non-Storm Water Discharges

The General Permit authorizes the following non-storm water discharges under specific conditions:

- Fire hydrant flushing
- Potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems
- Drinking fountain water
- Atmospheric condensates, including refrigeration, air conditioning, and compressor condensate
- Irrigation drainage
- Landscape watering
- Springs
- Groundwater
- Foundation or footing drainage
- Seawater infiltration where the seawater is discharged back to its source

No industrial processes associated with the Landfill are being conducted at Parcel E-2. Storm water runoff from a large parking area from the UCSF compound drains into the landfill drainage system. There is no known industrial activity conducted outside of covered spaces, but it is conceivable that spills or future activity could cause a discharge into the catch basin at Discharge Point 1 (Figure 5). The only potential discharge of non-storm water from the landfill is runoff from the cap that could occur during irrigation to maintain vegetative cover on the landfill cap. This discharge is addressed in the NSDEPP is presented in Section 3.0 of this plan.

Authorized non-storm water discharges that have a significant potential to contact pollutants and enter the storm sewer system were not identified at Parcel E-2. The following sections identify authorized non-storm water discharge sources with little potential to contact pollutants.

4.3.4.1 Landscape Irrigation

Landscape irrigation of the landfill cap is performed as part of the maintenance of the vegetative cover. The importance of the vegetative cover is to protect against erosion.

Potential Pollutant Source. Little risk exists for irrigation water to come in contact with contaminated materials or equipment because no industrial activities currently occur at this site and runoff will not flow through outside areas that have industrial operations or significant materials. However, vegetation, loose soil, and gravel have the potential to be carried into the storm drain system by the discharge.

BMPs. The following BMPs will be practiced during landscape watering activities required under the O&M plan for the Landfill (Tetra Tech 2003c):

- Limiting excessive watering; water delivery rates should not exceed the infiltration rate of the soil
- Adjusting irrigation controls to seasonal needs
- Maintaining sprinkler equipment in good working condition and repairing water leaks promptly; inspections of the sprinkler system are being conducted on a quarterly basis under the O&M plan for the landfill cap (Tetra Tech 2003c)

4.3.5 Significant Materials Inventory

The General Permit requires a description of significant materials that have been handled and stored at the site. The General Permit defines the term "significant materials" as the following:

> "Significant Materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges."

In addition, the General Permit defines the term "significant quantities" as follows:

> "Significant Quantities is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water."

No significant material is located at Parcel E-2. Therefore, no significant material is likely to be present in storm water discharge in significant quantities.

4.3.6 Best Management Practices

BMPs are implemented to reduce the potential for pollution associated with storm water runoff. Many Navy programs, including those incorporated into this SWDMP by reference, have management practices that control pollutants and add to the effectiveness of the storm water program. The General Permit requires that the SWPPP provide a narrative description of the BMPs to be implemented for each potential pollutant and its source. The BMPs presented in this section are applicable to all pollutants and sources identified at the Activity.

BMPs are divided into two categories, nonstructural BMPs and structural BMPs. Nonstructural BMPs are policies, practices, or procedures that reduce or prevent pollutants in storm water runoff. They are considered low technology, cost-effective measures. Structural BMPs generally consist of structural devises that reduce or prevent pollutants in storm water runoff.

Nonstructural BMPs include the following:

- Good housekeeping
- Preventive maintenance
- Employee training on storm water pollution prevention
- Record keeping and reporting
- Erosion control and site stabilization
- Inspection
- QA/QC programs

Structural BMPs include the following:

- Erosion and sediment control devices
- Storm water runoff control devices
- Storm water treatment

Because no industrial processes or activities occur at Parcel E-2, specific BMPs are limited to those that address erosion and sediment controls. These BMPs are discussed in Section 4.3.8.

Narrative descriptions of more than 100 BMPs for military facilities are provided in Appendix J. Some of these BMPs are currently being implemented at the Activity through the basewide SWPPP; others will be employed with implementation of this SWPPP or may be employed in future activities. Each BMP has been assigned a number or letter for ease of reference. The following BMPs identified in the SWPPP should be observed at Parcel E-2 and evaluated for degree of implementation and effectiveness:

- 001 Label all drums, cans, containers, tanks, and valves
- 002 Restrict access to area and equipment (S)
- 003 Perform regular cleaning
- 026 Routinely clean catch basins
- 027 Stencil signs on storm drain inlets
- 028 Keep equipment and vehicles clean
- 029 Maintain equipment in good condition
- 031 Conduct refresher courses in operating and safety procedures
- 032 Properly dispose of obsolete equipment, inoperable vehicles, and surplus materials
- 033 Check vehicles and equipment for leaks
- 054 Properly store containers
- 100 Use grassed swales (S)
- 101 Provide vegetative filter strips (S)
- 110 Regularly inspect and maintain storm water conveyance systems
- 113 Conduct personnel training regarding the SWPPP
- 116 Control dust and particulates (S)
- 117 Do not pour or deposit waste into storm drains
- 118 Routinely report any observed non-storm water discharges
- A Revegetate barren areas
- B Mulch exposed areas
- E Reduce flow velocity at outlet (S)
- F Use erosion control blankets

Note: (S) indicates that the BMP is structural. All others BMPs listed are nonstructural.

4.3.7 Storm Water Pollution Prevention Personnel

The General Permit requires the identification of specific personnel to oversee the development, implementation, and revision of the SWPPP and the specific personnel responsible for conducting all monitoring program activities. The Water Program Manager for the Navy is responsible for the oversight of the SWDMP. The responsibilities include the following:

- **Personnel Trainer:** Prepares training documents and materials as well as schedules, coordinates, and conducts training sessions.
- **Site Inspector:** Conducts annual comprehensive site compliance evaluations and prepares associated documentation.
- **Record Keeper:** Archives all documents associated with the SWPPP and MRPP, including site maps, inspection reports, maintenance records, and annual reports.
- **Monitoring Coordinator:** Collects and evaluates storm water samples, performs visual observations, and prepares the annual report for submittal to the RWQCB.

4.3.8 Erosion and Sediment Controls

Parcel E-2 is unpaved and does not contain any buildings. Except for the landfill cap, the topography of the site is a gentle slope toward the southwest, south, and southeast. Steeper slopes exist at the edge of the cap. The cap has a sprinkler system that provides landscape irrigation. Figure 4 shows drainage patterns and the associated BMPs at the site.

Potential Pollutant Sources. Based on site observations and the topography of Parcel E-2, storm water will primarily travel across the site toward the Bay. Some storm runoff north of the cap will travel toward a catch basin located near the Parcel E fence, southeast of the UCSF compound. Storm water may cause surface soil erosion in unpaved areas. Vegetation, loose soil, and gravel may be carried into the storm drain system or the Bay by storm water flow. In addition, authorized non-storm water discharges from landscape irrigation of the cap could cause erosion and carry sediment into the storm drain system or the Bay.

BMPs. General site inspections and vegetative cover inspections are conducted on a quarterly and semiannual basis, respectively, under the O&M plan for the Landfill (Tetra Tech 2003c). After each site inspection, necessary erosion control measures will be recommended and implemented.

Specific BMPs that apply to erosion and sediment control include:

- Revegetate barren areas to prevent soil erosion, cover large areas (defined as greater than 20 square feet in the O&M plan [Tetra Tech 2003c]) of exposed soil to keep it from washing away, plant vegetation, apply mulch, or use erosion-control fabric

- Restrict vehicles to paved roads. The Navy requires that the vehicles used by all contractors and visitors accessing the landfill site remain on gravel roads unless specifically authorized to work in off-road areas.

Erosion and sediment control measures implemented by the Navy during the development of the SWPPP are described in Section 4.2.2. These measures include (1) vegetating areas of exposed soil north and west of the Landfill, (2) installing an underground drainage pipe and two catch basins to direct storm water from UCSF off site, and (3) converting dirt roads to gravel roads. The specific BMP below is planned for the 2004 to 2005 season.

- **Vegetation of Slope at Low Point South of Cap**. Storm water flow from south and southeast of the cap channelizes just before entering the Bay. A gully was previously created at a low point south of the cap near the shoreline. No industrial activities occur in this area; however, a dirt road used for monitoring activities and poor soil conditions may inhibit the growth of vegetation. The Navy installed geotextile; gravel bags; and two rows of 120-foot long, 12-inch-diameter fiber rolls with upturned edges parallel to the tidal zone as a temporary control measure. The Navy will improve this BMP by vegetating the slopes. The improvement is scheduled to take place after remedial actions requiring dry conditions are conducted in the area.

The BMPs presented in Section 4.3.6 will also be used to minimize the potential for soil erosion and sediment transport during authorized non-storm water discharges.

4.4 ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The annual comprehensive site compliance evaluation report assesses whether elements of the SWPPP meet the conditions of the General Permit. The General Permit provides the following guidelines for conducting the annual comprehensive site compliance evaluation:

> "The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1–June 30). Evaluations shall be conducted within 8–16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

"a. A review of all visual observation records, inspection records, and sampling and analysis results.

"b. A visual inspection of all potential pollutant sources for evidence of, or potential for, pollutants entering the drainage system.

"c. A review and evaluation of all BMPs (both structural and nonstructural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

"d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of noncompliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit."

The annual comprehensive site compliance evaluation report must be signed by the Commanding Officer at HPS or the duly authorized representative and be included in the report.

The annual comprehensive site compliance evaluation will be conducted in three phases as described below.

- Phase 1 – Review Visual Observation Records and Analytical Results. Visual observations and analytical results obtained during the past monitoring year will be reviewed to identify any activities that may be affecting storm water runoff. The evaluation will be performed on all data available before the annual comprehensive site compliance evaluation. A prioritized list of activities will be developed to identify areas of primary focus.

- Phase 2 – Visually Inspect Site for BMP Implementation. All of the Landfill will be visually inspected, although the field effort should focus on activities identified in Phase 1. The inspection will evaluate whether conditions have changed that directly contribute to storm water pollution. The inspection will also determine whether the BMPs are adequate and properly implemented and maintained and whether additional BMPs are needed. Inspections will be conducted not less than 8 months after the date of the previous annual comprehensive site compliance evaluation. The inspector will determine the status of BMP implementation and effectiveness and identify whether BMPs are no longer applicable. The annual comprehensive site compliance evaluation is intended to be an independent check of progress toward implementing

the SWPPP and, as such, should proceed with as little notification as possible. Specific instructions for performing the annual comprehensive site compliance evaluation are provided in Appendix K. The annual facility inspection forms in Appendix K will be generated for each facility addressed in the SWPPP. BMPs from the SWPPP will be highlighted on the form to ensure the inspection of all applicable BMPs.

- Phase 3 – Prepare an Evaluation Report. The annual comprehensive site compliance evaluation is submitted as a part of the annual report. The summary will identify personnel who performed the comprehensive site compliance evaluation and will also identify areas of the SWPPP requiring revision, present a schedule for implementing SWPPP revisions, and identify any incidents of noncompliance with the General Permit (Appendix L).

4.5 PERSONNEL TRAINING

The General Permit requires that the SWPPP include training for personnel who are responsible for (1) implementing activities identified in the SWPPP; (2) conducting inspections, sampling, and visual observations; and (3) managing storm water.

4.5.1 Basewide Training

Effective management of storm water pollutants requires all personnel to be alert to those conditions that may cause pollution. Furthermore, proper day-to-day use of storm water BMPs by all personnel responsible for implementing the SWPPP is essential for the success of the SWPPP.

Storm water pollution prevention personnel are responsible for ensuring that personnel at HPS understand the relationship between industrial operations and storm water quality, the components of the SWPPP, how it will be implemented, and their role in contributing to the effectiveness of the storm water control measures. Personnel training can be integrated with the existing environmental and safety training program at HPS.

At a minimum, the SWPPP training will be conducted annually. The personnel trainer discusses sections of the SWPPP with operations personnel at the Activity (Section 4.3.7). The SWPPP information is also reviewed with new personnel during normal orientation training. The following subjects are addressed in the training program:

- Efficient use of products
- Housekeeping and other source controls
- Management practices other than source controls
- SWPPP requirements

Storm water pollution prevention personnel provide regular feedback about implementation and maintenance of storm water BMPs to HPS personnel. In addition, they evaluate the effectiveness of the training program annually and make improvements, as necessary, to promote personnel awareness and accountability.

As an educational measure, signs are posted in appropriate locations describing cleanup and reporting procedures. Also, storm drains leading to the municipal storm drain system or receiving water will be labeled to prevent improper waste disposal.

4.5.2 Facility-Specific Training

Personnel awareness of the relationship between their daily activities and storm water pollution is essential to improving the quality of storm water discharged from the facility. Furthermore, proper day-to-day use of the BMPs by all personnel is essential for the success of the SWPPP.

Personnel at many industrial facilities have weekly or monthly health and safety meetings where site-specific information is discussed that pertains to spill response and pollution prevention. Each facility maintains a copy of the applicable sections of this plan, and all appropriate personnel are required to read, understand, and implement its contents.

5.0 MONITORING AND REPORTING PROGRAM PLAN

This section discusses how this SWDMP meets the General Permit's requirements for an MRPP.

5.1 INTRODUCTION

The MRPP has the following four components: (1) storm water sampling and analysis, (2) non-storm water discharge visual observations, (3) storm water discharge visual observations, and (4) guidance for collecting and maintaining records and reporting the program results to the RWQCB.

5.1.1 Program Objectives

The General Permit describes the objective of a monitoring program as follows (General Permit, Section B.2)

- Ensure that storm water discharges comply with the discharge prohibitions, effluent limitations, and receiving water limitations specified in the General Permit. The monitoring provisions of the General Permit are intended to conform to existing discharge prohibitions, numeric and narrative effluent limitations, and any applicable water quality standards for receiving waters. Dischargers of industrial activities that are subject to numeric storm water effluent guidelines must sample for all applicable pollutants identified in 40 CFR Subchapter N and must collect additional data. The

General Permit requires that facilities comply with 10 specific categories of industrial activities with numeric effluent limitations that are specified in 40 CFR Subchapter N. At this time, the Landfill has no activities that are subject to numeric effluent limitations. If activities subject to 40 CFR Subchapter N occur at the Landfill, then the discharges associated with these activities would have storm water discharges monitored for compliance with applicable numeric effluent limitations.

- Ensure practices at the Activity to reduce or prevent pollutants in storm water discharges and non-storm water discharges are evaluated and revised to meet changing conditions. The monitoring program is intended to provide information that can be used to reflect changes in storm water discharges that may result from a change in activities, operational procedures, or materials handled. The annual comprehensive site compliance evaluation and the associated BMP and SWPPP revisions are designed to meet this requirement.

- Aid in the implementation and revision of the SWPPP required by the General Permit. The monitoring program has three major components that are intended to aid in the implementation of the SWPPP: (1) non-storm water discharge visual observations, (2) storm water discharge visual observations, and (3) sampling and analysis. Non-storm water discharge visual observations are intended to (1) eliminate unauthorized non-storm water discharges and (2) reduce or prevent pollutants from contacting authorized non-storm water discharges. Storm water discharge visual observations and storm water sampling and analysis are intended to provide an objective measurement of storm water quality. As storm water quality data are accumulated and assessed, the SWPPP may be modified to reflect these data.

- Measure the effectiveness of BMPs to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP requires implementation of BMPs that are selected on a site-specific basis to reduce or prevent pollutants from contacting storm water or authorized non-storm water discharges. Visual and analytical monitoring provides a means of evaluating the effectiveness of the selected BMPs. Information gained from analytical data and visual observations may result in modification of selected BMPs or identification of different BMPs.

5.1.2 Information Sources

The information sources used in the preparation of the MRPP include the following:

- "Presumptive Remedy for CERCLA Municipal Landfill Sites" (EPA 1993)

- Field observations

- "Storm Water Pollution Prevention Plan, Naval Facilities Engineering Command, Western Division, Hunters Point Annex, San Francisco, California" (PRC and Montgomery Watson 1994)

5.2 STORM WATER SAMPLING AND ANALYSIS

This section describes the requirements and methods for storm water sampling. Appendix G contains the storm water sampling instructions. Health and safety issues are discussed in the HPS basewide health and safety plan (Tetra Tech 2002a). QA/QC procedures, such as detection limits, container types holding times, and method recoveries related to sampling and analysis, are described in detail in the QA/QC Guidance Document Plan (Appendix I).

5.2.1 Industrial Outfalls and Sampling Locations

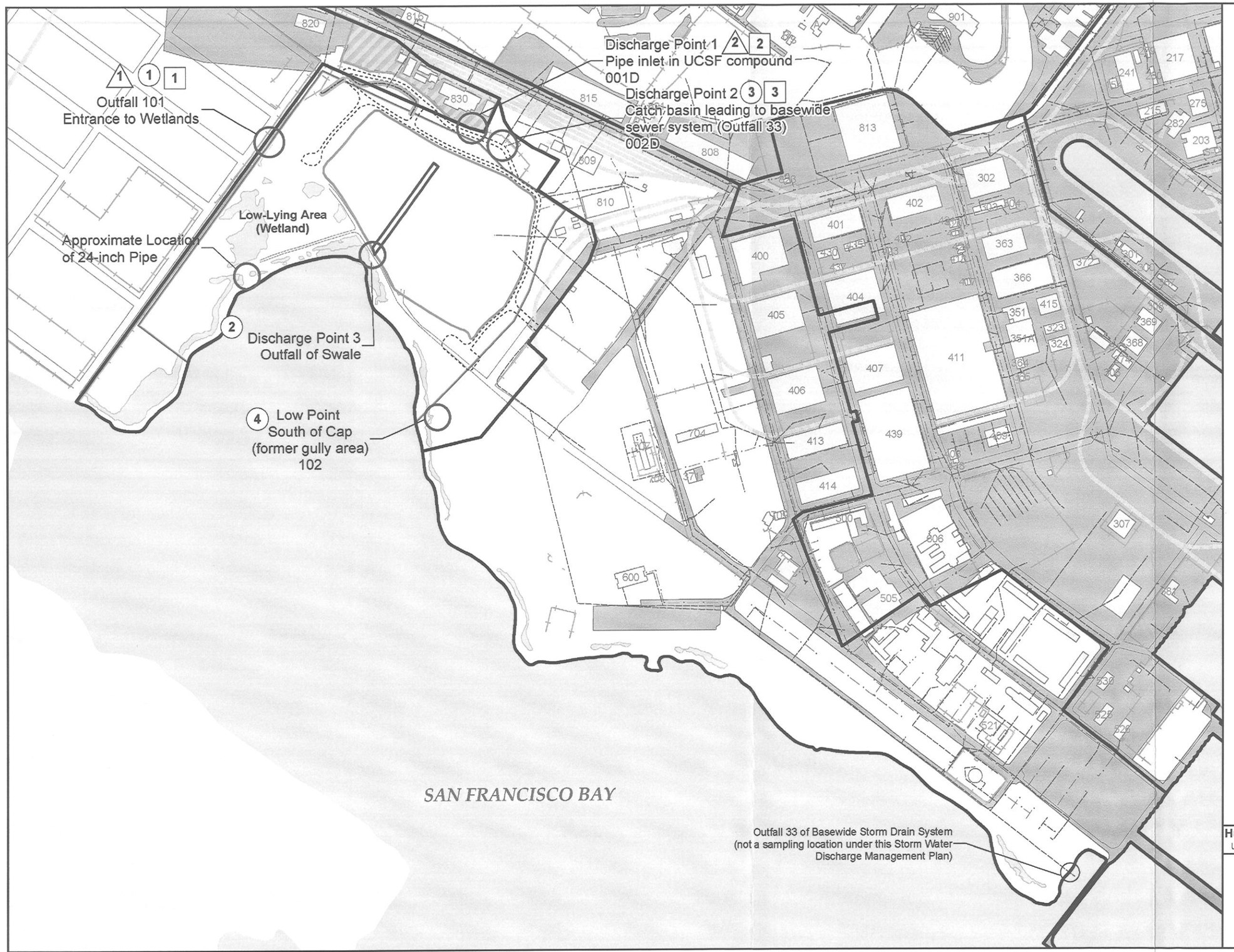
The General Permit (Sections B.5 and B.7) requires that samples be collected from all drainage areas that represent the quality and quantity of the site's storm water discharges. Storm water at the Landfill flows mainly toward the Bay through low-lying wetlands or vegetated areas. The main drainage pathways are (1) through the central riprap drainage swale and under-drain system on the landfill cap, (2) along drainage channels toward the low-lying wetland area west of the landfill cap that slowly drains to the Bay, (3) through a low point located southeast of the landfill cap in the former gully area, and (4) through two catch basins located north of the landfill cap that connect to an existing storm water system. The existing storm sewer system discharges to the Bay at Outfall 33 located at the southeastern tip of Parcel E.

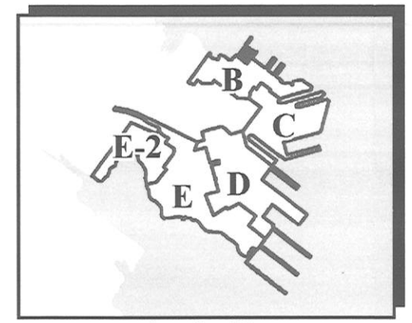
The following three locations at the Landfill were selected as representative storm water sampling locations:

- Catch basin near the pipe inlet to the underground storm drain for the UCSF compound (Discharge Point 1)
- Catch basin north of the landfill cap and east of the UCSF compound (Discharge Point 2)
- Entrance of the wetland area west of the landfill cap (Outfall 101)

Figure 6 shows these sampling locations. The area of these locations consists primarily of shallow grassy slopes and swales. Each sampling location is discussed below, as well as any specific sampling procedures required at the location:

Discharge Point 1. Storm water previously drained from a large parking area located on the UCSF compound onto the Landfill. As described in Section 4.2.2, the Navy installed an underground drainage system to prevent the flow of storm water from the parking area on the UCSF compound to unpaved areas near the Landfill. This system also collects surface drainage of storm water from a small swale along the fence line north of the landfill cap. Storm water runoff flowing from these two areas is directed into two catch basins and a polyvinyl chloride pipe that feeds the runoff into an existing storm sewer system that discharges at Outfall 33 (Figure 5). The Navy has installed gravel bags and a 4-by-4-foot square silt fence around each catch basin as a temporary sediment control measure while vegetation in the area is being established.





Location Map

- Storm Water Sampling Location
- Storm Water Discharge Visual Observation Location
- Non-Storm Water Discharge Visual Observation Location
- Parcel Boundary
- Installation Restoration Site 01/21
- University of California, San Francisco (UCSF) Compound
- Non-Navy Property
- Paved Surfaces
- Wetland Surveyed October 2001
- Building
- Storm Line
- Sanitary Sewer
- Ditch Northwest of Cap
- Gravel Road
- Limit of Landfill Cap
- Fence
- Rail Line
- Road

N

500 0 500

Scale in Feet

Tetra Tech EM Inc.

Hunters Point Shipyard, San Francisco, California
U.S. Department of the Navy, BRAC PMO West, San Diego, California

FIGURE 6
SAMPLING AND VISUAL OBSERVATION LOCATIONS
Final (Revision I)
Storm Water Discharge Management Plan
Industrial Landfill, Parcel E-2

2005-01-25 V:\Hunters Point\Projects\Landfill\storm water discharge management\landfill swdmp_fig6.mxd TtEMI-SF Kevin Ernst

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Appendix M describes the silt fence. The catch basin nearest to UCSF is Discharge Point 1, and most of the runoff at Discharge Point 1 comes from UCSF. Sampling at Discharge Point 1 should be conducted at the catch basin, according to the procedures described in Appendix G.

Discharge Point 2. Discharge Point 2 is the catch basin downstream from Discharge Point 1. Discharge Point 2 consists of runoff from both Discharge Point 1 (which originates primarily from UCSF) and the site (the area north of the landfill cap). Sampling at Discharge Point 2 should be conducted at the catch basin, according to the procedures described in Appendix G. If any contamination is detected at Discharge Point 2 (UCSF and site runoff), then the corresponding sample from Discharge Point 1 (UCSF runoff) can be used to determine if the contamination is from the site or from an off-site source (UCSF). Sampling at both locations should be conducted at or near the same time to obtain comparable samples from the two discharge points.

Outfall 101. Outfall 101 is a drainage channel from the landfill cap into the wetlands to the west. The western ditch leading to Outfall 101 is a large ditch with a very flat bottom slope. Because of the low flow rates generally experienced in this ditch, the flow near Outfall 101 was too shallow to effectively obtain a storm water sample without disturbing bottom sediments. This may have caused artificially high levels of suspended solids in the storm water samples collected at this location in the 2003 to 2004 wet season. To remedy this situation, the Navy proposes to install a small temporary weir at the location prior to sampling. After any bottom sediments disturbed during installation of the weir settle and the flow over the weir returns to a steady-state condition, a storm water sample will be collected as it flows over the weir. After collecting the sample, the weir will be removed so that the flow in the ditch is not hindered.

The sampling locations selected for monitoring are representative of storm water flow over these areas. The outfall from the center of the landfill cap (Discharge Point 3) is not representative of normal flows because the cap under-drain system greatly retards flow and filters out any sediment. Sampling at this location is expected to be difficult because of the low flow, which was verified during 2003 to 2004, when no discharge was observed. In addition, discharge from this location is not representative of flow over the site because surface water infiltrates the cap before it exits the under-drain pipe. Therefore, this location is not included in the monitoring program.

5.2.2 Analytical Parameters

The General Permit requires that storm water samples be analyzed for four routine parameters, toxic pollutant parameters likely to be present in storm water discharges in significant quantities, and other analytical parameters listed in Table D of the General Permit (Section B.5.c). Parameters listed in Table D are dependent on the facility's standard industrial classification code. Because no industrial activities are associated with Parcel E-2, analytical parameters listed in Table D do not apply.

Benchmark analytical values for each storm water analyte are used to evaluate the significance of the analytical results. A benchmark establishes a level below which analytical results are considered "insignificant." An important provision of the General Permit is that analytes (other than the routine parameters) can be eliminated from subsequent sampling programs following two consecutive "insignificant" results, or two consecutive results below the benchmark.

Currently, there is no single comprehensive regulatory list of storm water quality goals that can be used to classify analytical results for storm water as "insignificant" or to evaluate whether concentrations of analytes in storm water could "cause or contribute to an exceedance of a receiving water limitation." Therefore, the Navy has combined water quality goals from the sources listed below to develop a complete set of analyte benchmarks for analytical comparison purposes. The sources are listed in order of their priority to use in establishing the most appropriate water quality goal.

- EPA. 2000a. "Numeric Criteria for Priority Toxic Pollutants for the State of California, California Toxics Rule." Title 65 *Federal Register* (FR), Sections 31682-31719. May 18.

- SWRCB. 2001. "Water Quality Control Plan for Ocean Waters of California (California Ocean Plan)." December 3.

- EPA. 2000b. "National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities." Title 65 FR, Section 64746. Final Reissuance. October 30.

- EPA. Various Dates. "National Recommended Ambient Water Quality Criteria – Saltwater or Freshwater Aquatic Life Protection, Ambient Water Quality Criteria."

- EPA. 1993. "Integrated Risk Information System Reference Dose as a Drinking Water Level."

- EPA. 1991. "Drinking Water Standards, Maximum Contaminant Levels – California." Title 22 *California Code of Regulations*, Division 4, Chapter 15. Domestic Water Quality and Monitoring.

- EPA. 2002. "Drinking Water Standards, Maximum Contaminant Levels – Federal." 40 CFR, Parts 141 and 143.

Where the above sources do not have a water quality goal for an analyte, the laboratory's method detection limit (MDL) is used for analytical comparative purposes.

Outfalls were assigned to the receiving water body into which they discharge to identify the most appropriate benchmark from either the California Toxics Rule or the California Ocean Plan. The water quality goal from the California Toxics Rule was used as the analytical benchmark at outfalls that discharge into a saltwater-enclosed bay or estuary or into freshwater-receiving water. The water quality goal from the California Ocean Plan was used as the analytical

benchmark at outfalls that discharge into the Bay. When an analyte did not have a water quality goal from either the California Toxics Rule or the California Ocean Plan, the water quality goal from the Multi-Sector General Permit was used as the analytical benchmark. For analytes with water quality goals from both the California Toxics Rule and Multi-Sector General Permit, the lower of the two values was used as the analytical benchmark. For analytes with water quality goals from both the California Ocean Plan and Multi-Sector General Permit, the lower of the two values was used as the analytical benchmark. For analytes with no water quality goal listed for the California Toxics Rule, the California Ocean Plan, or the Multi-Sector General Permit, a benchmark was selected in order of priority from the remaining references listed. In cases where an analyte has no published water quality goal, the laboratory's MDL was used as the analytical benchmark.

The General Permit prohibits storm water discharges that "cause or contribute to an exceedance of a receiving water limitation." The benchmark values described above will be used as a metric for discharge evaluation. The benchmark values should not be used to evaluate compliance at HPS. Table 1 lists the benchmark values to be used during the annual comprehensive evaluation of site compliance to investigate possible sources of pollutants and evaluate the effectiveness of BMPs in place at the site.

5.2.2.1 Routine Parameters

Storm water samples will be analyzed for the four routine parameters listed in Table 2.

5.2.2.2 Toxic Pollutant Parameters

Storm water samples will be analyzed for three toxic pollutant parameters that may be present in storm water discharge in significant quantities (Table 3).

5.2.3 Sampling Schedule

This section discusses the schedule for storm water sampling and the procedures for reduction of sampling frequency.

5.2.3.1 Routine Parameters

Each year, the Navy will collect storm water samples at each of the drainage locations identified in Section 5.2.1. Samples will be collected during the first hour of discharge from (1) the first storm event of the wet season and (2) at least one other storm event during the wet season. The General Permit defines the wet season as the period from October 1 through May 31. Storm water samples will be analyzed for the parameters listed in Tables 2 and 3.

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Benchmarks				Water Quality Criteria									
					California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Semivolatile Organic Compounds														
1-Chloronaphthalene	1.2	1.2	1.2	---	---	---	---	---	---	---	---	---	---	1.2
1-Naphthylamine	4.3	4.3	4.3	---	---	---	---	---	---	---	---	---	---	4.3
1,2,4,5-Tetrachlorobenzene	160	160	250	---	---	---	---	---	160	250	2	---	---	1.0
1,2-Dichlorobenzene (o-DCB)	17,000	5,100[b]	17,000	---	17,000	17,000	5,100[b]	---	1,970	1,120	630	600	600	1.4
1,2-Diphenylhydrazine	0.54	0.16	0.54	---	0.54	0.54	0.16	---	---	270	---	---	---	1.1
1,3,5-Trinitrobenzene	210	210	210	---	---	---	---	---	---	---	210	---	---	0.035
1,3-Dichlorobenzene (m-DCB)	2,600	5,100[b]	2,600	---	2,600	2,600	5,100[b]	---	1,970	1,120	---	---	---	1.2
1,3-Dinitrobenzene	0.7	0.7	0.7	---	---	---	---	---	---	---	0.7	---	---	0.088
1,4-Dichlorobenzene (p-DCB)	2,600	18	2,600	---	2,600	2,600	18	---	1,970	1,120	---	5	75	0.18
2,3,4,6-Tetrachlorophenol	440	10(IM)	210	---	---	---	10(IM)	---	440	---	210	---	---	1.4
2,4,5-Trichlorophenol	10(IM)	10(IM)	700	---	---	---	10(IM)	---	---	---	700	---	---	1.5
2,4,6-Trichlorophenol	6.5	0.29	6.5	---	6.5	6.5	0.29	---	---	---	---	---	---	1.8
2,4,6-Trinitrotoluene (TNT)	0.35	0.35	0.35	---	---	---	---	---	---	---	0.35	---	---	0.075
2,4-Dichlorophenol	790	10(IM)	790	---	790	790	10(IM)	---	---	2,020	21	---	---	1.7
2,4-Dimethylphenol	2,300	300(IM)	2,300	---	2,300	2,300	300(IM)	---	---	2,120	140	---	---	1.5
2,4-Dinitrophenol	14,000	300(IM)	14,000	---	14,000	14,000	300(IM)	---	4,850	230	14	---	---	6.2
2,4-Dinitrotoluene	9.1	2.6	9.1	---	9.1	9.1	2.6	---	590	330	14	---	---	0.058
2,6-Dichlorophenol	10(IM)	10(IM)	10(IM)	---	---	---	10(IM)	---	---	---	---	---	---	1.3
2,6-Dinitrotoluene	590	590	330	---	---	---	---	---	590	330	---	---	---	1.8
2-Chloronaphthalene	4,300	7.5	4,300	---	4,300	4,300	---	---	7.5	1,600	560	---	---	1.7
2-Chlorophenol (o-Chlorophenol)	400	10(IM)	400	---	400	400	10(IM)	---	---	4,380	35	---	---	1.3
2-Methylnaphthalene	1.5	1.5	1.5	---	---	---	---	---	---	---	---	---	---	1.5
2-Methylphenol (o-Cresol)	300(IM)	300(IM)	35	---	---	---	300(IM)	---	---	---	35	---	---	1.3
2-Naphthylamine	5.3	5.3	5.3	---	---	---	---	---	---	---	---	---	---	5.3
2-Nitroaniline	6.7	6.7	6.7	---	---	---	---	---	---	---	---	---	---	6.7
2-Nitrophenol (o-Nitrophenol)	4,850	300(IM)	230	---	---	---	300(IM)	---	4,850	230	---	---	---	1.5
2-Picoline	1.2	1.2	1.2	---	---	---	---	---	---	---	---	---	---	1.2
3,3'-Dichlorobenzidine	0.077	0.0081	0.077	---	0.077	0.077	0.0081	---	---	---	---	---	---	6.8
3,4-Methylphenol (m/p-Cresol)	300(IM)	300(IM)	35	---	---	---	300(IM)	---	---	---	35	---	---	1.1
3-Methylcholanthrene	1.8	1.8	1.8	---	---	---	---	---	---	---	---	---	---	1.8
3-Methylphenol (m-Cresol)	300(IM)	300(IM)	35	---	---	---	300(IM)	---	---	---	35	---	---	1.8
3-Nitroaniline	4.3	4.3	4.3	---	---	---	---	---	---	---	---	---	---	4.3

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS (Continued)

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Benchmarks				Water Quality Criteria									
					California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Semivolatile Organic Compounds (Continued)														
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	765	300(IM)	765	---	765	765	300(IM)	---	4,850	230	---	---	---	3.4
4-Aminobiphenyl	1.4	1.4	1.4	---	---	---	---	---	---	---	---	---	---	1.4
4-Bromophenyl phenyl ether	360	360	360	---	---	---	---	---	---	360	---	---	---	1.8
4-Chloro-3-methylphenol (4-Chloro-m-cresol)	10(IM)	10(IM)	30	---	---	---	10(IM)	---	---	30	---	---	---	2.3
4-Chloroaniline (p-Chloroaniline)	28	28	28	---	---	---	---	---	---	---	28	---	---	5.7
4-Chlorophenyl phenyl ether	1.8	1.8	1.8	---	---	---	---	---	---	---	---	---	---	1.8
4-Nitroaniline (p-Nitroaniline)	7.5	7.5	7.5	---	---	---	---	---	---	---	---	---	---	7.5
4-Nitrophenol (p-Nitrophenol)	4,850	300(IM)	230	---	---	---	300(IM)	---	4,850	230	---	---	---	1.6
7,12-Dimethylbenz(a)anthracene	300	300	300	---	---	---	---	---	300	---	---	---	---	2.1
aa-Dimethylphenylamine	1.2	1.2	1.2	---	---	---	---	---	---	---	---	---	---	1.2
Acenaphthene	2,700	970	2,700	---	2,700	2,700	---	---	970	1,700	420	---	---	1.5
Acenaphthylene	300	0.0088	300	---	---	---	0.0088	---	300	---	---	---	---	0.020
Acetophenone	700	700	700	---	---	---	---	---	---	---	700	---	---	1.4
Aniline	77(1H)	77(1H)	28(1H)	---	---	---	---	---	77(1H)	28(1H)	---	---	---	1.3
Anthracene	110,000	0.0088	110,000	---	110,000	110,000	0.0088	---	300		2,100	---	---	0.00028
Benzo(a)anthracene	0.049	0.0088	0.049	---	0.049	0.049	0.0088	---	300	---	---	---	---	0.00078
Benzaldehyde	700	700	700	---	---	---	---	---	---	---	700	---	---	50
Benzidine	0.00054	0.000069	0.00054	---	0.00054	0.00054	0.000069	---	---	2,500	---	---	---	5.1
Benzo(a)pyrene	0.049	0.0088	0.049	---	0.049	0.049	0.0088	---	300	---	---	0.2	0.2	0.00057
Benzo(b)fluoranthene	0.049	0.0088	0.049	---	0.049	0.049	0.0088	---	300	---	---	---	---	0.00037
Benzo(g,h,i)perylene	0.0088	0.0088	0.0088	---	---	---	0.0088	---	300	---	---	---	---	0.014
Benzo(k)fluoranthene	0.049	0.0088	0.049	---	0.049	0.049	0.0088	---	300	---	---	---	---	0.00054
Benzoic acid	28,000	28,000	28,000	---	---	---	---	---	---	---	28,000	---	---	50
Benzyl alcohol	1.4	1.4	1.4	---	---	---	---	---	---	---	---	---	---	1.4
Bis(2-chloroethoxy)methane	4.4	4.4	4.4	---	---	---	4.4	---	---	---	---	---	---	1.4
Bis(2-chloroethyl)ether	1.4	0.045	1.4	---	1.4	1.4	0.045	---	---	238,000	---	---	---	1.1
Bis(2-chloroisopropyl)ether	170,000	1,200	170,000	---	170,000	170,000	1,200	---	---	238,000	280	---	---	1.4
Bis(2-ethylhexyl)phthalate (Di[2-ethyhexyl]phthalate)	5.9	3.5	5.9	---	5.9	5.9	3.5	---	2,944	2,000	---	4	6	1.7
Butylbenzylphthalate (BBP)	3,000[g]	3,000[g]	3,000[g]	---	5,200	5,200	---	3,000[g]	2,944	940	140	---	---	1.0

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS (Continued)

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Benchmarks				Water Quality Criteria									
					California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Semivolatile Organic Compounds (Continued)														
Chrysene	0.049	0.0088	0.049	—	0.049	0.049	0.0088	—	300	—	—	—	—	0.00036
Dibenz(a,h)anthracene	0.049	0.0088	0.049	—	0.049	0.049	0.0088	—	300	—	—	—	—	0.0023
Dibenz(a,j)acridine	4.1	4.1	4.1	—	—	—	—	—	—	—	—	—	—	4.1
Dibenzofuran	1.7	1.7	1.7	—	—	—	—	—	—	—	—	—	—	1.7
Diethylphthalate (DEP)	120,000	33,000	120,000	—	120,000	120,000	33,000	—	2,944	940	5,600	—	—	1.9
Dimethylphthalate (DMP)	1,000[b]	1,000[b]	1,000[b]	—	2,900,000	2,900,000	820,000	1,000[b]	2,944	940	—	—	—	1.9
Di-n-butylphthalate (DBP)	12,000	3,500	12,000	—	12,000	12,000	3,500	—	2,944	940	700	—	—	1.7
Di-n-octylphthalate (DOP)	2,944	2,944	940	—	—	—	—	—	2,944	940	—	—	—	1.9
Diphenylamine	180	180	180	—	—	—	—	—	—	—	180	—	—	1.5
Ethyl methanesulfonate	5.7	5.7	5.7	—	—	—	—	—	—	—	—	—	—	5.7
Fluoranthene	42[c]	15	42[c]	—	370	370	15	42[g]	40	3,980	280	—	—	0.017
Fluorene	14,000	0.0088	14,000	—	14,000	14,000	0.0088	—	300	—	280	—	—	0.0069
Hexachlorobenzene	0.00077	0.00021	0.00077	—	0.00077	0.00077	0.00021	—	160	250	—	1	1	0.02
Hexachlorobutadiene (Perchlorobutadiene)	50	14	50	—	50	50	14	—	32	90	—	—	—	0.014
Hexachlorocyclopentadiene	17,000	58	17,000	—	17,000	17,000	58	—	7.0	7.0	42	50	50	3.5
Hexachloroethane	8.9	2.5	8.9	—	8.9	8.9	2.5	—	940	980	0.7	—	—	1.4
Indeno(1,2,3-cd)pyrene	0.049	0.0088	0.049	—	0.049	0.049	0.0088	—	300	—	—	—	—	0.0010
Isophorone	600	730	600	—	600	600	730	—	12,900	117,000	140	—	—	1.4
Methyl methanesulfonate	1.6	1.6	1.6	—	—	—	—	—	—	—	—	—	—	1.6
Naphthalene (Naphtalin)	2,350	2,350	2,300	—	—	—	—	—	2,350	2,300	14	—	—	1.3
Nitrobenzene	1,900	4.9	1,900	—	1,900	1,900	4.9	—	6,680	27,000	3.5	—	—	0.08
N-Nitrosodimethylamine	8.1	7.3	8.1	—	8.1	8.1	7.3	—	3,300,000	5,850	—	—	—	0.80
N-Nitroso-di-n-butylamine	3,300,000	3,300,000	5,850	—	—	—	—	—	3,300,000	5,850	—	—	—	2.4
N-Nitroso-di-n-propylamine	1.4	0.38	1.4	—	1.4	1.4	0.38	—	3,300,000	5,850	—	—	—	1.4
N-Nitrosodiphenylamine	16	2.5	16	—	16	16	2.5	—	3,300,000	5,850	—	—	—	1.8
N-Nitrosopiperidine	1.6	1.6	1.6	—	—	—	—	—	—	—	—	—	—	1.6
p-Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	1.2	1.2	1.2	—	—	—	—	—	—	—	—	—	—	1.2
Pentachlorophenol (PCP)	13(1H)	10(IM)	19(1H)	—	13(1H)	19(1H)	10(IM)	—	13(1H)	19(1H)	—	1	1	0.07
Phenacetin	1.6	1.6	1.6	—	—	—	—	—	—	—	—	—	—	1.6
Phenanthrene	0.0088	0.0088	0.0088	—	—	—	0.0088	—	300	—	—	—	—	0.0088

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS (Continued)

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Benchmarks				Water Quality Criteria									
					California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Semivolatile Organic Compounds (Continued)														
Phenol	4,600,000	300(IM)	4,600,000	---	4,600,000	4,600,000	300(IM)	---	5,800	10,200	4,200	---	---	0.70
Pronamide (Kerb)	53	53	53	---	---	---	---	---	---	---	53	---	---	1.5
Pyrene	10[d]	10[d]	10[d]	---	11,000	11,000	0.0088	10[d]	300	---	210	---	---	0.0025
Toxaphene	0.21(1H)	0.00021	0.73(1H)	---	0.21(1H)	0.73(1H)	0.00021	---	0.21(1H)	0.73(1H)	---	3	3	0.042
Polychlorinated Biphenyls			---	---	---	---	---	---	---	---	---	---	---	---
Aroclor-1016 (PCB-1016)	0.127[e]	0.127[e]	0.127[e]	---	---	---	---	0.127[e]	---	---	---	---	---	0.43
Aroclor-1221 (PCB-1221)	100[d]	100[d]	100[d]	---	---	---	---	100[d]	---	---	---	---	---	0.64
Aroclor-1232 (PCB-1232)	0.318[e]	0.318[e]	0.318[e]	---	---	---	---	0.318[e]	---	---	---	---	---	0.16
Aroclor-1242 (PCB-1242)	0.20[d]	0.200[d]	0.200[d]	---	---	---	---	0.200[d]	---	---	---	---	---	0.31
Aroclor-1248 (PCB-1248)	2.54[e]	2.54[e]	2.54[e]	---	---	---	---	2.54[e]	---	---	---	---	---	0.11
Aroclor-1254 (PCB-1254)	100[d]	100[d]	100[d]	---	---	---	---	100[d]	---	---	---	---	---	0.11
Aroclor-1260 (PCB-1260)	0.477[e]	0.477[e]	0.477[e]	---	---	---	---	0.477[e]	---	---	---	---	---	0.18
Metals[f]														
Aluminum (A1), Total	750[g]	750[g]	750[g]	---	---	---	---	750[g]	---	750(1H)	---	1,000	*50-200[g]*	27
Aluminum (A1), Dissolved	750[g]	750[g]	750[g]	---	---	---	---	750[g]	---	750(1H)	---	1,000	*50-200[g]*	27
Antimony (Sb), Total	636[e]	636[e]	636[e]	---	4,300	4,300	1,200	636[e]	---	9,000	2.8	6	6	2.1
Antimony (Sb), Dissolved	636[e]	636[e]	636[e]	---	4,300	4,300	1,200	636[e]	---	9,000	2.8	6	6	2.1
Arsenic (As), Total	69(1H)	80(1M)	340(1H)	---	69(1H)	340(1H)	80(IM)	168[e]	---	---	2.1	50	50	2.2
Arsenic (As), Dissolved	69(1H)	80(1M)	340(1H)	---	69(1H)	340(1H)	80(IM)	---	69(1H)	340(1H)	---	---	---	2.2
Barium (Ba), Total	490	490	490	---	---	---	---	---	---	---	490	1,000	2,000	1.1
Barium (Ba), Dissolved	490	490	490	---	---	---	---	---	---	---	490	1,000	2,000	1.1
Beryllium (Be), Total	0.033	0.033	130[h]	---	---	---	0.033	130[h]	---	130	14	4	4	0.08
Beryllium (Be), Dissolved	0.033	0.033	130[h]	---	---		0.033	130[h]	---	130	14	4	4	0.08
Cadmium (Cd), Total	15.9[e]	10(IM)	4.6(1H)	---	44(1H)	4.6(1H)	10(IM)	15.9[e]	---	---	3.5	5	5	0.38
Cadmium (Cd), Dissolved	15.9[e]	9.4(IM)	4.3(1H)	---	42(1H)	4.3(1H)	9.4(IM)	---	---	---	---	---	---	0.38
Calcium (Ca), Total	150	150	150	---	---	---	---	---	---	---	---	---	---	150
Calcium (Ca), Dissolved	150	150	150	---	---	---	---	---	---	---	---	---	---	150
Chromium III (CrIII), Total	10,300	190,000	1,738(1H)	---	---	1,738(1H)	190,000	---	10,300	---	10,500	---	---	0.95
Chromium III (CrIII), Dissolved	10,300	190,000	550(1H)	---	---	550(1H)	---	---	---	550(1H)	---	---	---	0.95
Chromium (Cr), Total	20(IM)[g]	20(IM)[g]	20(IM)[g]	---	---	---	20(IM)[g]	---	---	---	---	50	100	0.95
Chromium (Cr), Dissolved	20(IM)[g]	20(IM)[g]	20(IM)[g]	---	---	---	20(IM)[g]	---	---	---	---	50	100	0.95
Copper (Cu), Total	5.8(1H)	30(IM)	13.5(1H)	63.6[e]	5.8(1H)	13.5(1H)	30(IM)	63.6[e]	---	---	---	1,300	1,300	1.3
Copper (Cu), Dissolved	4.8(1H)	25(IM)	13(1H)	63.6[e]	4.8(1H)	13(1H)	25(IM)	63.6[e]	4.8(1H)	13(1H)	---	---	---	1.3

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS (Continued)

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Benchmarks				Water Quality Criteria									
					California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Metals[f] (Continued)														
Iron (Fe), Total	1,000(IM)	1,000(IM)	1,000(IM)	---	---	---	---	1,000[i]	---	1,000(IM)	---	*300*[g]	*300*[g]	8.2
Iron (Fe), Dissolved	1,000(IM)	1,000(IM)	1,000(IM)	---	---	---	---	1,000[i]	---	1,000(IM)	---	*300*[g]	*300*[g]	8.2
Lead (Pb), Total	82[g]	20(IM)	82(1H)	---	220(1H)	82(1H)	20(IM)	82[g]	---	---	---	15	15	1.3
Lead (Pb), Dissolved	82[g]	19(IM)	65(1H)	---	210(1H)	65(1H)	19(IM)	---	210(1H)	65(1H)	---	---	---	1.3
Magnesium (Mg), Total	64[e]	64[e]	64[e]	---	---	---	---	64[e]	---	---	---	---	---	34
Magnesium (Mg), Dissolved	64[e]	64[e]	64[e]	---	---	---	---	64[e]	---	---	---	---	---	34
Mercury (Hg), Total	2.1(1H)	0.40(IM)	1.6(1H)	---	2.1(1H)	1.6(1H)	0.40(IM)	2.4[g]	---	---	---	2	2	0.02
Mercury (Hg), Dissolved	1.8(1H)	0.34(IM)	1.4(1H)	---	1.8(1H)	1.4(1H)	0.34(IM)	---	1.8(1H)	1.4(1H)	---	---		0.2
Molybdenum (Mo), Total	35	35	35	---	---	---	---	---	---	---	35	---	---	1.1
Molybdenum (Mo), Dissolved	35	35	35	---	---	---	---	---	---	---	35	---	---	1.1
Nickel (Ni), Total	75(1H)	50(IM)	470(1H)	---	75(1H)	470(1H)	50(IM)	1,417[g]	---	---	140	100	---	1.2
Nickel (Ni), Dissolved	74(1H)	49(IM)	470(1H)	---	74(1H)	470(1H)	49(IM)	---	74(1H)	470(1H)	---	---	---	1.2
Potassium (K), Total	62	62	62	---	---	---	---	---	---	---	---	---	---	62
Potassium (K), Dissolved	62	62	62	---	---	---	---	---	---	---	---	---	---	62
Rhenium (Re), Total	0.2	0.2	0.2	---	---	---	---	---	---	---	---	---	---	0.2
Rhenium (Re), Dissolved	0.2	0.2	0.2	---	---	---	---	---	---	---	---	---	---	0.2
Selenium (Se), Total	238[e]	150(IM)	20(1H)	---	290(1H)	20(1H)	150(IM)	238[e]	---	---	---	50	50	3
Selenium (Se), Dissolved	238[e]	150(IM)	20(1H)	---	290(1H)	20(1H)	150(IM)	---	290(1H)	20(1H)	---	---	---	3
Silver (Ag), Total	2.2(1H)	7(IM)	4.0(1H)	---	2.2(1H)	4.0(1H)	7(IM)	32[e]	---	---	35	*100*	*100*	1.1
Silver (Ag), Dissolved	1.9(1H)	5.9(IM)	3.4(1H)	---	1.9(1H)	3.4(1H)	5.9(IM)	---	1.9(1H)	3.4(1H)	---	---	---	1.1
Sodium (Na), Total	720	720	720	---	---	---	---	---	---	---	---	---	---	720
Sodium (Na), Dissolved	720	720	720	---	---	---	---	---	---	---	---	---	---	720
Thallium (Tl), Total	6.3	2	6.3	---	6.3	6.3	2	---	2,130	1,400	0.6	2	2	0.98
Thallium (Tl), Dissolved	6.3	2	6.3	---	6.3	6.3	2	---	2,130	1,400	0.6	2	2	0.98
Titanium (Ti), Total	0.42	0.42	0.42	---	---	---	---	---	---	---	---	---	---	0.42
Titanium (Ti), Dissolved	0.42	0.42	0.42	---	---	---	---	---	---	---	---	---	---	0.42
Vanadium (V), Total	63	63	63	---	---	---	---	---	---	---	63	---	---	0.49
Vanadium (V), Dissolved	63	63	63	---	---	---	---	---	---	---	63	---	---	0.49
Zinc (Zn), Total	95(1H)	117[g]	122(1H)	117[g]	95(1H)	122(1H)	200(IM)	117[g]	---	---	2,100	*5,000*[g]	*5,000*[g]	3.8
Zinc (Zn), Dissolved	90(1H)	117[g]	120(1H)	117[g]	90(1H)	120(1H)	189(IM)	---	90(1H)	120(1H)	---	---	---	3.8

TABLE 1: WATER QUALITY CRITERIA FOR ANALYTICAL RESULTS (Continued)

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2, Hunters Point Shipyard, San Francisco, California

	Water Quality Criteria													
	Benchmarks				California Toxics Rule				EPA Ambient Criteria					
Analyte[a]	Enclosed Bay and Estuary Discharge (Saltwater)	Pacific Ocean Discharge	Inland Surface Water Discharge (Fresh Water)	RWQCB NPDES Storm Water Permit	Saltwater Consumption of Aquatic Organisms Only (1A)	Freshwater Consumption of Aquatic Organisms Only (1B)	California Ocean Plan Consumption of Aquatic Organisms Only (2)	EPA Multi-Sector General Permit (3)	Saltwater Aquatic Life Protection (4A)	Freshwater Aquatic Life Protection (4B)	EPA IRIS Reference Dose as a Drinking Water Level (5)	California Drinking Water Standard (6)	EPA Drinking Water Standard (7)	Lab. MDL (8)
Other														
Oil and Grease	15,000[l]	15,000[k]	15,000[k]	---	---	---	75,000(IM)	15,000[k]	---	---	---	---	---	92
pH	6.0-9.0(IM)	6.0-9.0(IM)	6.0-9.0(IM)	---	---	---	6.0-9.0(IM)	6.0-9.0[l]	6.5-8.5(IM)	6.5-9.0(IM)	---	---	*6.5-8.5*[g]	0.01
Specific Conductance (EC)	900	900	900	---	---	---	---	---	---	---	---	*900*	---	1
Total Suspended Solids (TSS)	60,000(IM)	60,000(IM)	100,000[m]	---	---	---	60,000(IM)	100,000[m]	---	---	---	---	---	2,000

Notes: The following sources were used to develop the most appropriate water quality goal for discharge of storm water from Outfall 33. The Multi-Sector General Permit values are source discharge limits; however, the values from the California Toxics Rule and the California Ocean Plan are receiving water limits. Therefore, if an analyte has a Multi-Sector General Permit value, it was compared separately with the appropriate California Toxics Rule value (saltwater or freshwater) and the California Ocean Plan value. The lesser of the two values of each comparison was used as the benchmark for the appropriate receiving water, except for copper at 63.6 µg/L and zinc at 117 µg/L, as required under a RWQCB NPDES Storm Water Permit. For analytes without values from the RWQCB NPDES Storm Water Permit, Multi-Sector General Permit, California Toxics Rule, or California Ocean Plan, the most appropriate benchmark value from the other sources listed below was selected.

Shaded values indicate benchmarks used for comparison of analytical data.

(1A, 1B) EPA. 2000a. "Numeric Criteria for Priority Toxic Pollutants for the State of California; California Toxics Rule." Title 65 FR, Sections 31682-31719. May 18. (Values are "30-day Average Concentration for Human Health Protection [consumption of aquatic organisms only for both Saltwater and Freshwater]," unless indicated IM or 1H.) SWRCB. 2000. "The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California." May 18. (Phase 1 of the Inland Surface Waters Plan and the Enclosed Bays and Estuaries Plan was adopted by SWRCB on March 2, 2000, and became effective on May 18, 2000.)

(2) SWRCB. 2001. "Water Quality Control Plan for Ocean Waters of California (California Ocean Plan)." December 3. (Values are 30-day Average Concentration for Human Health Protection [consumption of aquatic organisms only], unless indicated IM.)

(3) EPA. 2000b. "National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities." Title 65 FR, Section 64746. Final Reissuance, October 30. (Values are from water quality criteria for freshwater aquatic life protection and human health protection [consumption of water and organisms], federal and state storm water discharge limits, and laboratory detection limits.)

(4A, 4B) EPA. Various Dates. "National Recommended Ambient Water Quality Criteria – Saltwater or Freshwater Aquatic Life Protection, Ambient Water Quality Criteria." (Values are LOEL concentrations for acute toxicity, unless indicated IM or 1H.)

(5) EPA. 1993. "Integrated Risk Information System Reference Dose as a Drinking Water Level."

(6) California Department of Health Services. 1991. "Drinking Water Standards, Maximum Contaminant Levels – California." Title 22 CCR, Division 4, Chapter 15. Domestic Water Quality and Monitoring.

(7) EPA. 2002. "Drinking Water Standards, Maximum Contaminant Levels – Federal." Title 40 CFR, Parts 141 and 143.

(8) Where sources 1 through 7 do not have a water quality goal for an analyte, the laboratory's MDL is used.

a Except for specific conductance and pH, all units are in µg/L.

b Discharge limitations and compliance data

c EPA-recommended ambient water quality criteria – human health protection (consumption of water and organisms)

d Laboratory-derived minimum level

e Minimum level based on highest laboratory MDL times a factor of 3.18

f For metals, "Total" is the total fraction value and "Dissolved" is the dissolved fraction value. Only Source 1 (California Toxics Rule) provides conversion factors (or translators) for calculating metals values for both total and dissolved fractions. These calculations are only available for the following metals: arsenic, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, silver, selenium, and zinc. For the other sources listed, the dissolved fraction values for metals are also the total fraction values except as discussed for the California Ocean Plan.
Freshwater-receiving assumptions for water for the dissolved fraction for cadmium, chromium III, copper, nickel, silver, and zinc are as follows: temperature 20 °C, pH 7.8, hardness as calcium carbonate 100 milligrams per liter, and salinity of 20 grams per kilogram.
Values for total metal fractions for the California Toxics Rule were calculated from dissolved metal fraction values from the California Toxics Rule using the reciprocal of the conversion factor (or translator) used to calculate dissolved metal fraction values from total metal fraction values.
The California Ocean Plan value was developed for chromium VI, but may be applied to total chromium, if the valence (III or VI) of chromium is unknown.
Dissolved fraction values from the California Ocean Plan for the following metals were calculated using total metals values that used the metal conversion factors from the California Toxics Rule: arsenic, cadmium, chromium VI, copper, lead, mercury, nickel, selenium, silver, and zinc. For all other metals for the California Ocean Plan, the total fraction value is also the dissolved fraction value

g Values in *italic type* (such as aluminum [Total] 50-200 µg/L) are secondary standards; all other EPA and California Drinking Water Standards listed are primary standards.

h EPA-recommended ambient water quality criteria –LOEL concentration for acute toxicity, freshwater aquatic life protection

i EPA-recommended ambient water quality criteria – acute (IM or 1H) concentration, freshwater aquatic life protection

j EPA-recommended ambient water quality criteria – chronic (24-hour or 4-day average) concentration, freshwater aquatic life protection

k EPA. 2002. Median concentration of storm water effluent limitation guidelines, Title 40 CFR, Part 419

l EPA. 2002. Secondary treatment regulations, Title 40 CFR, Part 133.

m National Urban Runoff Program median concentration.

---	No criterion was established	IRIS	Integrated Risk Information System
µg/L	Micrograms per liter	Lab.	Laboratory
(1H)	1-Hour average maximum concentration for saltwater or freshwater aquatic life protection	LOEL	Lowest observed effects level
(IM)	Instantaneous maximum concentration for marine aquatic life protection	MDL	Method detection limit
CCR	*California Code of Regulations*	NPDES	National Pollutant Discharge Elimination System
CFR	*Code of Federal Regulations*	PCB	Polychlorinated biphenyl
EPA	U.S. Environmental Protection Agency	RWQCB	California Regional Water Quality Control Board
FR	*Federal Register*	SWRCB	State Water Resources Control Board

TABLE 2: ROUTINE ANALYTICAL PARAMETERS AND METHODOLOGIES

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

Routine Parameter	Analysis Method Number
pH	EPA 150.1
Specific conductance	EPA 120.1
Total suspended solids	EPA 160.2
Oil and grease	EPA 413.2 or EPA 1664 when adopted

Note:

EPA U.S. Environmental Protection Agency

TABLE 3: TOXIC POLLUTANT ANALYTICAL PARAMETERS AND METHODOLOGIES

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

Toxic Pullutant Parameter	Analysis Method Number
Semivolatile organic compounds	EPA 8270C
Polychlorinated biphenyls	EPA 8082
Metals	EPA 6010B (except mercury) or EPA 7470A for mercury

Note:

EPA U.S. Environmental Protection Agency

5.2.3.2 *Sampling and Analysis Reduction*

The Navy may reduce the number of storm water samples required for the remaining term of the General Permit, if certification of the following conditions is made:

- Samples have been collected during at least six storm events from all required drainage areas
- All prohibited non-storm water discharges have been eliminated or otherwise permitted
- The Navy demonstrates compliance with the terms and conditions of the General Permit for the previous 2 years
- The Navy demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants

The above conditions remain in effect for a minimum of 1 year after filing certification with the RWQCB.

Unless otherwise instructed by the RWQCB, the Navy will collect and analyze samples from two additional storm events (or one additional storm event when certification is filed for the wet season beginning October 1) during the remaining term of this General Permit in accordance with Table 4.

TABLE 4: REDUCED SAMPLING SCHEDULE
Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

Sampling Reduction Certification Filed By	Samples Will Be Collected and Analyzed in the Wet Seasons	
	Sample 1	Sample 2
September 1, 2005	October 1, 2005 – May 31, 2006	October 1, 2007 – May 31, 2008
September 1, 2006	October 1, 2006 – May 31, 2007	October 1, 2008 – May 31, 2009
September 1, 2007	October 1, 2007 – May 31, 2008	October 1, 2009 – May 31, 2010

The Navy will collect samples of the first storm event of the wet season. If samples cannot be collected from the first storm event of the wet season, then samples will be collected from another storm event during the same wet season. If samples cannot be collected in a required wet season, then samples will be collected from another storm event in the next wet season.

5.3 NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS

The General Permit requires that non-storm water discharge visual observations be performed quarterly (January to March, April to June, July to September, and October to December) and within 6 to 18 weeks of the last observation. The observations are to be conducted during daylight hours and on days with no storm water discharges. Non-storm water discharge visual observations are required for each drainage area at the site associated with industrial activities. Non-storm water discharge visual observations are also required at each authorized source of non-storm water discharge. As described in Section 4.3.4, the only authorized non-storm water discharge may occur from the landfill cap during cap irrigation. This water would drain into the ditch which discharges at Outfall 101 or from the drainage swale in the center of the landfill cap, which drains southwest toward the Bay (Figure 6). However, the swale in the center of the landfill contains large riprap and flow cannot be directly observed without removing this rock protection, so visual observation of non-storm water discharge at this point has been eliminated. Therefore, Outfall 101 will be visually observed for flow from the landfill due to irrigation, and the catch basin at Discharge Point 1 will be observed to determine if any non-storm water flows are originating from off-site (UCSF compound). Appendix E provides detailed instructions for completing non-storm water discharge visual observations.

5.4 STORM WATER DISCHARGE VISUAL OBSERVATIONS

The General Permit requires storm water discharge visual observations of all storm water discharge locations during the first hour of one storm event per month during the wet season (October 1 through May 31). The storm water discharge visual observations will be conducted during daylight hours of a normal work day during the start of rain events that are preceded by at least 3 days without storm water discharges. The observations will document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutant observed. If the presence of pollutants is observed, efforts will be made following the observations to identify the source of the pollutants. The investigation will begin at the outfall and continue through the drainage basin until the pollutant source is located, if possible. Once the source is located, actions to reduce or prevent pollutants from contacting storm water discharge will be taken. The storm water discharge visual observations should be made at Outfall 101, the outlet of the drainage swale (Discharge Point 3) in the center of the landfill cap, and the catch basin at Discharge Point 2. Figure 6 shows the low point south of the landfill cap (Discharge Point 4) that will be added as a visual observation location after it is vegetated and after remedial actions requiring dry conditions are conducted in the area. Appendix F provides detailed instructions for completing storm water discharge visual observations.

5.5 RECORDS MANAGEMENT AND REPORTING REQUIREMENTS

This section discusses the requirements for retaining and maintaining storm water records and documents and the reporting requirements of this SWDMP.

5.5.1 Records Management

The SWDMP and supporting records are public documents under Section 308(b) of the CWA. Any member of the public may request to review the site's storm water permit documentation. Additionally, the SWDMP and supporting records must be made available upon request of a representative of the EPA, SWRCB, RWQCB, or local storm water management agencies. Copies of the SWDMP will be retained on site and made available to the public as requested.

Copies of the annual report will be retained for a minimum period of 5 years from the date of measurement, inspection, observation, report, or application. These records will be maintained and managed by the record keeper designated in Section 4.3.7. Other archived records may include copies of reports and other correspondence with the SWRCB, RWQCB, and the local storm water management agency. Records will contain the names of individuals; date, time, and place of the task; observation; inspection; and sample collection or measurement. Records about the SWPPP will include the following:

- Documents pertaining to changes in the design, construction, operation, or maintenance of a facility
- Documents pertaining to preventive maintenance tasks related to storm water pollution prevention
- Source area master list and schedule for BMPs
- Annual comprehensive site compliance evaluation report that includes (1) identification of personnel performing the evaluation, (2) the date of the evaluation, (3) necessary SWPPP revisions, (4) a schedule for revision and implementation that is compliant with the General Permit, (5) any incidents of noncompliance and the corrective actions taken, and (6) certification that the facility operator is in compliance with the General Permit. If the above certification cannot be provided, an explanation as to why the facility operator is not in compliance is required.

Records about the MRPP will include the following:

- Date, place, and time of the sampling, visual observations, and measurements
- Individual(s) who performed the sampling, visual observations, and measurements
- Date and approximate time of analyses
- Individual(s) who performed the analyses
- Analytical results, method detection limits, and the analytical techniques or methods used

- QA/QC records and results
- Non-storm water discharge inspections and visual observation and storm water discharge visual observation records
- Visual observation and sample collection exemption records
- Calibration and maintenance records of on-site instruments used
- Sampling and analysis exemption and reduction certifications and supporting documentation
- Records of any corrective actions and follow-up activities that resulted from the visual observations
- Annual report

5.5.2 Reporting Requirements

This section discusses the reporting requirements of the General Permit.

5.5.2.1 Annual Report

An annual report will be submitted by July 1 of each year to the Executive Officer of the San Francisco Bay RWQCB.

The annual report will include the following:

- A summary of improvements or modifications of BMPs
- Descriptions of all known releases to storm drains or the Bay
- A summary of the visual observations and sampling results
- An evaluation of the visual observation and sampling and analysis results
- Laboratory reports
- Method detection limits and analytical parameters; analytical results that are less than the detection limit of each analytical parameter will be reported as "less than the method detection limit"
- The annual comprehensive site compliance evaluation report

- Explanation of why a facility did not implement any activities required by the General Permit (if applicable and not already included in the evaluation report)
- Certification of the Activity's compliance or noncompliance with the requirements of the General Permit
- Any information on sampling and analysis exemptions and reductions
- A description of why sampling or visual observations could not be conducted (if appropriate)

The annual report will be signed by a principal executive officer having responsibility for overall operations. The principal executive officer of a federal agency is the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. A duly authorized representative may sign the certification if the authorization is made in writing by the principal/senior executive officer; the authorization will be kept as part of the SWPPP.

Tables 5 and 6 may be used as checklists for the monitoring program components that will be conducted and for information to be included in the annual report.

5.5.2.2 Planned Changes

The Navy will provide advance notice to the RWQCB and local storm water management agency of any planned physical alteration or additions to the general permitted site. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

5.5.2.3 Anticipated Noncompliance

The Navy will provide advance notice to the RWQCB and local storm water management agency of any planned changes at the permitted site that may result in noncompliance with the General Permit requirements.

5.5.2.4 Noncompliance Reporting

The Navy will report any noncompliance at the time monitoring reports are submitted. The written reports will contain (1) a description of the noncompliance and its cause; (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and (3) steps taken or planned to reduce and prevent recurrence of the noncompliance.

TABLE 5: STORM WATER PERMIT ANNUAL COMPLIANCE CHECKLIST

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

Year:_____

Signature:_____

Description	Completed Date	by: Signature	Comments
Storm Water Pollution Prevention Plan			
1. SWPPP reviewed and modified for (year)			
2. Annual comprehensive site compliance evaluation			
3. Records archived? (note where archived)			
Monitoring And Reporting Program Plan			
1. Non-storm water discharge visual observations (first quarter)			
2. Non-storm water discharge visual observations (second quarter)			
3. Non-storm water discharge visual observations (third quarter)			
4. Non-storm water discharge visual observations (fourth quarter)			
5. Sampling and analysis of storm water discharge (first storm of monitoring year)			
6. Sampling and analysis of storm water discharge (second storm of monitoring year)			
7. Storm water discharge visual observation (October)			
8. Storm water discharge visual observation (November)			
9. Storm water discharge visual observation (December)			
10. Storm water discharge visual observation (January)			
11. Storm water discharge visual observation (February)			
12. Storm water discharge visual observation (March)			
13. Storm water discharge visual observation (April)			
14. Storm water discharge visual observation (May)			
15. Annual Report submitted to RWQCB			

Notes:

RWQCB California Regional Water Quality Control Board
SWPPP Storm water pollution prevention plan

TABLE 6: RWQCB ANNUAL REPORT CHECKLIST

Final (Revision I) Storm Water Discharge Management Plan, Industrial Landfill, Parcel E-2
Hunters Point Shipyard, San Francisco, California

Instructions	Date Completed	Initials
1. Report must be sent to: Executive Officer San Francisco Bay Regional Water Quality Control Board 1515 Clay St. Suite 1400 Oakland, CA 94612		
2. Report due July 1 at San Francisco Bay Regional Water Quality Control Board.		
3. Report must include the following: a. Summary of improvements and modifications to best management practices b. Description of all known releases to storm drains or the Bay c. A summary of visual observations and sampling results d. An evaluation of the visual observations and sampling and analysis results e. Laboratory reports f. Method detection limits and analytical parameters used g. An annual comprehensive site compliance evaluation report h. An explanation of why the Activity did not comply with the requirements of the General Permit (if applicable) i. Sampling and analysis exemptions and reductions information j. A description of why sampling or visual observations could not be conducted (if appropriate)		
4. Archive copy made		

5.5.2.5 *Compliance Schedule*

Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule of this General Permit will be submitted no later than 14 days following each scheduled date.

5.6 MONITORING REVISION

The General Permit requires that the monitoring program be revised whenever appropriate. In general, a monitoring program can be evaluated quantitatively, based on assessment of water quality results (such as long-term trends in chemical concentrations or other measurements), or qualitatively, by keeping track of the extent to which observations and analytical monitoring are implemented. The monitoring program should be evaluated at least once each year for consistency with the evolving goals of the storm water monitoring program. The General Permit requires submittal of an annual report to RWQCB by July 1 of each year. This report will describe the monitoring tasks performed over the course of the year, as well as any results. The annual report will also present any information on sampling and analysis exemptions and reductions.

6.0 REFERENCES

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Tetra Tech. 2003a. "Draft Storm Water Discharge Management Plan, IR-01/21, Industrial Landfill, Parcel E, HPS, San Francisco, California." January 7.

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Tetra Tech. 2004a. "2003-2004 Annual Report for Storm Water Discharge Management, IR-01/21, Industrial Landfill, Parcel E, HPS, San Francisco, California." July 1.

Tetra Tech. 2004b. "Draft (Revision 1) Storm Water Discharge Management Plan, IR-01/21, Industrial Landfill, Parcel E-2, HPS, San Francisco, California." September 30.

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EPA. 2000a. "Numeric Criteria for Priority Toxic Pollutants for the State of California, California Toxics Rule." Title 65 *Federal Register* (FR), Sections 31682-31719. May 18.

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EPA. 2002. "Drinking Water Standards, Maximum Contaminant Levels – Federal." 40 CFR, Parts 141 and 143.

EPA. Various Dates. "National Recommended Ambient Water Quality Criteria – Saltwater or Freshwater Aquatic Life Protection, Ambient Water Quality Criteria."

APPENDIX A
RECOMMENDATIONS FROM THE 2003-2004 ANNUAL REPORT, IR-01/21, INDUSTRIAL LANDFILL, PARCEL E

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APPENDIX A - RECOMMENDATIONS FROM THE 2003-2004 ANNUAL REPORT, IR-01/21, INDUSTRIAL LANDFILL, PARCEL E - IS CONTAINED IN ELECTRONIC FORMAT AND IS TOO VOLUMINOUS TO PRINT OR IMAGE

TO VIEW THE DATA, CONTACT:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

APPENDIX B
GENERAL PERMIT

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inston H. Hickox
Secretary for Environmental Protection

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5538
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • Internet Address: http://www.swrcb.ca.gov

Gray Davis
Governor

To: STORM WATER DISCHARGER

SUBJECT: CHECKLIST FOR SUBMITTING A NOTICE OF INTENT

In order for the State Water Resources Control Board to expeditiously process your Notice of Intent (NOI), the following items must be submitted to either of the addresses indicated below:

1._____ NOI (please keep a copy for your files) with all applicable sections completed and original signature of the facility operator;

2._____ Check made out to the "State Water Resources Control Board" with the appropriate fee. The regular fee is **$700.00**. Dairy farms pay a one time fee of $2000.00; and

3. _____ Site Map of the facility (see NOI instructions). DO NOT SEND BLUEPRINTS

U.S. Postal Service Address

State Water Resources Control Board
Division of Water Quality
Attn: Storm Water Section
P.O. Box 1977
Sacramento, CA 95812-1977

Overnight Mailing Address

State Water Resources Control Board
Division Of Water Quality
Attn: Storm Water, 15th Floor
1001 I Street
Sacramento, CA 95814

NOIs are processed in the order they are received. A NOI receipt letter will be mailed to the facility operator within approximately two weeks. Incomplete NOI submittals will be returned to the facility operator within the same timeframe and will specify the reason(s) for return. If you need a receipt letter by a specific date (for example, to provide to a local agency), we advise that you submit your NOI thirty (30) days prior to the date the receipt letter is needed.

Please do not call us to verify your NOI status. A copy of your NOI receipt letter will be available on our web page within twenty-four (24) hours of processing. Go to: http://esmr.swrcb.ca.gov/dwq/IndReceiptLetter.asp to retrieve an electronic copy of your NOI receipt letter. If you have any questions regarding this matter, please contact us at (916) 341-5538.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES EXCLUDING CONSTRUCTION ACTIVITIES

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FACT SHEET
FOR

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
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GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES EXCLUDING CONSTRUCTION ACTIVITIES

BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) that establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) published final regulations that establish application requirements for storm water permits. The regulations require that storm water associated with industrial activity (storm water) that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

U.S. EPA developed a four-tier permit issuance strategy for storm water discharges associated with industrial activity as follows:

Tier I, Baseline Permitting--One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity.

Tier II, Watershed Permitting--Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual or watershed-specific general permits.

Tier III, Industry-Specific Permitting--Specific industry categories will be targeted for individual or Industry-specific general permits.

Tier IV, Facility-Specific Permitting--A variety of factors will be used to target specific facilities for individual permits.

The regulations allow authorized states to issue general permits or individual permits to regulate storm water discharges.

Consistent with Tier I, Baseline Permitting, of the U.S. EPA permitting strategy, the State Water Board issued a statewide General Permit on November 19, 1991 that applied to all storm water discharges requiring a permit except construction activity. The monitoring requirements of this General Permit were amended September 17, 1992. A separate statewide general permit has been issued for construction activity.

To obtain authorization for continued and future storm water discharge under this General Permit, each facility operator must submit a Notice of Intent (NOI). This approach is consistent with the four-tier permitting strategy described in Federal regulations, i.e., Tier 1, Baseline Permitting. Tier 1, Baseline Permitting, enables the State to begin reducing pollutants in industrial storm water in the most efficient manner possible.

This General Permit generally requires facility operators to:

1. Eliminate unauthorized non-storm water discharges;
2. Develop and implement a storm water pollution prevention plan (SWPPP); and
3. Perform monitoring of storm water discharges and authorized non-storm water discharges.

TYPES OF STORM WATER DISCHARGES COVERED BY THIS GENERAL PERMIT

This General Permit is intended to cover all new or existing storm water discharges and authorized non-storm water discharges from facilities required by Federal regulations to obtain a permit including those (1) facilities previously covered by the San Francisco Bay Regional Water Quality Control Board Order No. 92-011 (as amended by Order No. 92-116), (2) facilities designated by the Regional Water Quality Control Boards (Regional Water Boards), (3) facilities whose operators seek coverage under this General Permit, (4) and facilities required by future U.S. EPA storm water regulations.

The General Permit is intended to cover all facilities described in Attachment 1, whether the facility is primary or is auxiliary to the facility operator's function. For example, although a school district's primary function is education, a facility that it operates for vehicle maintenance of school buses is a transportation facility that is covered by this General Permit.

The definition of "storm water associated with industrial activity" is provided in Attachment 4, Definition 9, of this General Permit. Facilities that discharge storm water associated with industrial activity requiring a General Permit are listed by category in 40 Code of Federal Regulations (CFR) Section 122.26(b)(14) (Federal Register, Volume 55 on

Pages 48065-66) and in Attachment 1 of this General Permit. The facilities can be publicly or privately owned. General descriptions of these categories are:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR Subchapter N);

2. Manufacturing facilities;

3. Mining/oil and gas facilities;

4. Hazardous waste treatment, storage, or disposal facilities;

5. Landfills, land application sites, and open dumps that receive industrial waste;

6. Recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, automobile yards;

7. Steam electric generating facilities;

8. Transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.;

9. Sewage treatment plants;

10. Construction activity (covered by a separate general permit); and

11. Certain facilities (often referred to as "light industry") where industrial materials, equipment, or activities are exposed to storm water.

For the most part, these facilities are identified in the Federal regulations by a Standard Industrial Classification (SIC).

Category 1 Dischargers

The following categories of facilities currently have storm water effluent limitation guidelines for at least one of their subcategories. They are cement manufacturing (40 CFR Part 411); feedlots (40 CFR Part 412); fertilizer manufacturing (40 CFR Part 418); petroleum refining (40 CFR Part 419); phosphate manufacturing (40 CFR Part 422); steam electric power generation (40 CFR Part 423); coal mining (40 CFR Part 434); mineral mining and processing (40 CFR Part 436); ore mining and dressing (40 CFR Part 440); and asphalt emulsion (40 CFR Part 443). A facility operator whose facility falls into one of these general categories should examine the effluent guidelines to determine if the facility is categorized in one of the subcategories that have storm water effluent guidelines. If

a facility is classified as one of those subcategories, that facility is subject to the standards listed in the CFR for that category and is subject to this General Permit. This General Permit contains additional requirements (see Section B.6.) for facilities with storm water effluent limitations guidelines.

Category 5 Dischargers

Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes (Category 5) may be subject to this General Permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate Regional Water Board. Facility operators of closed landfills that are regulated by waste discharge requirements (WDRs) may be required to comply with this General Permit. In some cases, it may be appropriate for closed landfills to be covered by the State Water Board's General Permit during closure activities. The Construction Activities General Permit should cover new landfill construction. Facility operators should contact their Regional Water Board to determine the appropriate permit coverage.

Category 10 Dischargers

Facility operators of Category 10 (light industry) facilities are not subject to this General Permit if they can certify that the following minimum conditions at their facilities are met:

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted.

2. All areas of past exposure have been inspected and cleaned, as appropriate.

3. All materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

4. All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

5. There is no exposure of materials associated with industrial activity through other direct or indirect pathways such as particulates from stacks and exhaust systems.

6. There is periodic re-evaluation of the facility to ensure Conditions 1, 3, 4, and 5 are continuously met.

Currently, facility operators that can certify that the above conditions are met are not required to notify the State Water

Board or Regional Water Board. These facility operators are advised to retain such certification documentation on site.

The Ninth Circuit Court of Appeals invalidated the exemption granted by U.S. EPA for storm water discharges from facilities in Category 11 that do not have exposure and remanded the regulation to U.S. EPA for further action. The State Water Board, at this time, is not requiring storm water discharges from facilities in Category 11 that do not have exposure to be covered by this General Permit. Instead, the State Water Board will await future U.S. EPA or court action clarifying the types of storm water discharges that must be permitted. If necessary, the State Water Board will reopen the General Permit to accommodate such a clarification.

Section 1068 of the Intermodal Surface Transportation Act of 1991 exempts municipal agencies serving populations of less than 100,000 from Phase I permit requirements for most facilities they operate (uncontrolled sanitary landfills, power plants, and airports are still required to be permitted in Phase I). Phase II of the Permit Program scheduled to begin August 7, 2001 will cover the facilities that are exempt from Phase I permit requirements.

TYPES OF DISCHARGES NOT COVERED BY THIS GENERAL PERMIT

1. CONSTRUCTION ACTIVITY: Discharges from construction activity of five acres or more, including clearing, grading, and excavation. A separate general permit was adopted on August 20, 1992 for this industrial category.

2. FACILITIES WHICH HAVE NPDES PERMITS CONTAINING STORM WATER PROVISIONS: Some storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards. This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the State Water Board or Regional Water Board may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the Federal and State storm water regulations. Interested parties may petition the State Water Board or appropriate Regional Water Board to issue individual or General NPDES Permits. General Permits may be issued for a particular industrial group or watershed area.

3. FACILITIES DETERMINED INELIGIBLE BY REGIONAL WATER BOARDS: Regional Water Boards may determine that discharges from a facility or groups of facilities, otherwise eligible for coverage under this General Permit, have potential water quality impacts that may not be appropriately addressed by

this General Permit. In such cases, a Regional Water Board may require such discharges to be covered by an individual or general NPDES permit. Interested persons may petition the appropriate Regional Water Board to issue individual NPDES permits. The applicability of this General Permit to such discharges will be terminated upon adoption of an individual NPDES permit or a different general NPDES permit.

4. FACILITIES WHICH DO NOT DISCHARGE STORM WATER TO WATERS OF THE UNITED STATES: The discharges from the following facilities are not required to be permitted:

   a. FACILITIES THAT DISCHARGE STORM WATER TO MUNICIPAL SANITARY SEWER SYSTEMS: Facilities that discharge storm water to municipal sanitary sewer systems or combined sewer systems are not required by Federal regulations to be covered by an NPDES storm water permit or to submit an NOI to comply with this General Permit. (It should be noted that many municipalities have sewer use ordinances that prohibit storm drain connections to their sanitary sewers.)

   b. FACILITIES THAT DO NOT DISCHARGE STORM WATER TO SURFACE WATERS OR SEPARATE STORM SEWERS: Storm water that is captured and treated and/or disposed of with the facility's NPDES permitted process wastewater and storm water that is disposed of to evaporation ponds, percolation ponds, or combined sewer systems are not required to obtain a storm water permit. To avoid liability, the facility operator should be certain that no discharge of storm water to surface waters would occur under any circumstances.

5. MOST SILVICULTURAL ACTIVITIES: Storm water discharges from most silvicultural activities such as thinning, harvesting operations, surface drainage, or road construction and maintenance are exempt from this permit. Log sorting or log storage facilities that fall within SIC 2411 are required to be permitted.

6. MINING AND OIL AND GAS FACILITIES: Oil and gas facilities that have not released storm water resulting in a discharge of a reportable quantity (RQ) for which notification is or was required pursuant to 40 CFR Parts 110, 117, and 302 at any time after November 19, 1987 are not required to be permitted unless the industrial storm water discharge contributed to a violation of a water quality standard. Mining facilities that discharge storm water that does not come into contact with any overburden, raw materials, intermediate product, finished product, by-product, or waste product located at the facility are not required to be permitted. These facilities must be permitted if they have a new release of storm water resulting in a discharge of an RQ.

7. FACILITIES ON INDIAN LANDS: the U.S. EPA will regulate Discharges from facilities on Indian lands.

NOTIFICATION REQUIREMENTS

Storm water discharges from facilities described in the section titled "Types of Storm Water Discharges Covered by This General Permit" must be covered by an NPDES permit. An NOI must be submitted by the facility operator for each individual facility to obtain coverage. Certification of the NOI signifies that the facility operator intends to comply with the provisions of the General Permit. Facility operators who have filed NOIs for the State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-011 (as amended by Order No. 92-116) will be sent an abbreviated NOI soon after adopting this General Permit that must be completed and returned within 45 days of receipt. Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. A landowner may also file an NOI for a facility if the landowner, rather than the facility operator(s), is responsible for compliance with this General Permit.

A facility operator that does not submit an NOI for a facility must submit an application for an individual NPDES permit. U.S. EPA's regulations [40 CFR 122.21 (a)] exclude facility operators covered by a general permit from requirements to submit an individual permit application unless required by the Regional Water Board. The NOI requirements of this General Permit are intended to establish a mechanism which can be used to establish a clear accounting of the number of facility operators complying with the General Permit, their identities, the nature of operations at the facilities, and location.

All facility operators filing an NOI after the adoption of this General Permit must comply with this General Permit. Existing facility operators who have filed NOIs prior to the adoption of this General Permit shall continue to complete the requirements of the previous General Permit through June 30, 1997 including submitting annual reports to the Regional Water Boards by July 1, 1997. Group Leaders are required to submit a 1996-97 Group Evaluation Report by August 1, 1997.

DESCRIPTION OF GENERAL PERMIT CONDITIONS

Prohibitions

This General Permit authorizes storm water and authorized non-storm water discharges from facilities that are required to be covered by a storm water permit. This General Permit prohibits discharges of material other than storm water (non-storm water discharges) that are not authorized by the General Permit and discharges containing hazardous substances in storm water in excess of reportable quantities established at 40 CFR 117.3 and 40 CFR 302.4. Authorized non-storm water discharges are addressed in the Special Conditions of the General Permit.

Effluent Limitations

NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

U.S. EPA regulations (40 CFR Subchapter N) establish effluent limitation guidelines for storm water discharges from facilities in ten industrial categories. For these facilities, compliance with the effluent limitation guidelines constitutes compliance with BAT and BCT for the specified pollutants and must be met to comply with this General Permit.

For storm water discharges from facilities not among the ten industrial categories listed in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. The reasons why establishment of numeric effluent limitations is not feasible are discussed in detail in State Water Board Orders No. WQ 91-03 and WQ 91-04. Therefore, this General Permit allows the facility operator to implement best management practices (BMPs) to comply with the requirements of this General Permit. This approach is consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits".

Receiving Water Limitations

Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard. The General Permit requires facility operators to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges through the development and implementation of BMPs which constitutes compliance with BAT and BCT and, in most cases, compliance with water quality standards. If receiving water quality standards are exceeded, facility operators are required to submit a written report providing additional BMPs that will be implemented to achieve water quality standards.

Storm Water Pollution Prevention Plans (SWPPPs)

All facility operators must prepare, retain on site, and implement an SWPPP. The SWPPP has two major objectives: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

This General Permit requires development and implementation of an SWPPP emphasizing BMPs. This approach provides the flexibility necessary to establish appropriate BMPs for different types of industrial activities and pollutant sources. As this General Permit covers vastly different types of facilities, the State Water Board recognizes that there is no single best way of developing or organizing an SWPPP. The SWPPP requirements contain the essential elements that all facility operators must consider and address in the SWPPP. This General Permit's SWPPP requirements are more detailed than the previous general permit's SWPPP requirements, and the suggested order of the SWPPP elements have been rearranged (1) to correspond more closely with other storm water permits in effect throughout the country, and (2) to generally follow a more logical path. Facility operators that have already developed and implemented SWPPPs under previous general permits are required to review the SWPPP's requirements contained in this General Permit and then review their existing SWPPP for adequacy. If the existing SWPPP adequately identifies and assesses all potential sources of pollutants and describes the appropriate BMPs necessary to reduce or prevent pollutants, the facility operator is not required to revise the existing SWPPP.

One of the major elements of the SWPPP is the elimination of unauthorized non-storm water discharges to the facility's storm drain system. Unauthorized non-storm water discharges can be generated from a wide variety of potential pollutant sources. They include waters from the rinsing or washing of vehicles, equipment, buildings, or pavement; materials that have been improperly disposed of or dumped, and spilled; or leaked materials. Unauthorized non-storm water discharges can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. Unauthorized non-storm water discharges may enter the storm drain system via conveyances such as floor drains. All conveyances should be evaluated to determine whether they convey unauthorized non-storm water discharges to the storm drain system. Unauthorized non-storm water discharges (even when commingled with storm water) shall be eliminated or covered by a separate NPDES Permit.

There are many non-storm water discharges that, under certain conditions, should not contain pollutants associated with

industrial activity (i.e., air conditioning condensate, potable water line testing, landscaping overflow, etc.). Item D, Special Conditions, provides the conditions where certain listed non-storm water discharges are authorized by this General Permit.

Monitoring Program

The General Permit requires development and implementation of a monitoring program. The objectives of the monitoring program are to (1) demonstrate compliance with the General Permit, (2) aid in the implementation of the SWPPP, and (3) measure the effectiveness of the BMPs in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

All facility operators (with the exception of inactive mining operations) are required to:

1. Perform visual observations of storm water discharges and authorized storm water discharges.

2. Collect and analyze samples of storm water discharges. Analysis must include pH, total suspended solids (TSS), total organic carbon (TOC), specific conductance, toxic chemicals, and other pollutants which are likely to be present in storm water discharges in significant quantities, and those parameters listed in Table D of this General Permit. The Table D parameters are those listed in the U.S. EPA Multi-Sector General Permit. Facility operators subject to Federal storm water effluent limitation guidelines in 40 CFR Subchapter N must also sample and analyze for any pollutant specified in the appropriate category of 40 CFR Subchapter N.

Facility operators are not required to collect samples or perform visual observations during adverse climatic conditions. Sample collection and visual observations are required only during scheduled facility operating hours. Visual observations are required only during daylight hours. Facility operators that are unable to collect any of the required samples or visual observations because of the above circumstances must provide documentation to the Regional Water Board in their annual report.

Facility operators may be exempt from performing sampling and analysis if they: (1) do not have areas of industrial activity exposed to storm water, (2) receive an exemption from a local agency which has jurisdiction over the storm sewer system, or (3) receive an exemption from the appropriate Regional Water Board. Facility operators must always perform sampling and analysis for any pollutant specified in storm water effluent limitation guidelines.

This General Permit contains a new procedure where facility operators, if they meet certain minimum conditions, may certify compliance with the General Permit and reduce the number of

sampling events required to be sampled for the remaining term of the General Permit. Each Regional Water Board may develop instructions, guidance, and checklists to assist facility operators to complete sampling reduction requests.

Local agencies that wish to provide sampling and analysis exemptions or reductions to facility operators within their jurisdiction shall develop a certification program that clearly indicates the certification procedures and criteria used by the local agency. At a minimum, these programs should include site inspections, a review of the facility operator's SWPPP, and a review of other records such as monitoring data, receiving water data, etc. The certification program shall be approved by the local Regional Water Board before implementation.

Alternative Monitoring

Facility operators are required to develop a facility-specific monitoring program that satisfies both the minimum monitoring program requirements and the objectives of the monitoring program. Some facility operators have indicated that cost-effective alternative monitoring programs can be developed that provide equivalent or more accurate indicators of pollutants and/or BMP performance than a monitoring program based upon the minimum monitoring program requirements. An example of such an alternative monitoring program would be one that identifies sample locations at or near pollutant sources rather than sampling an entire drainage area where the storm water discharge has been diluted with storm water from areas with little or no industrial activity.

The State Water Board does not want to preclude facility operators from developing better, and perhaps more cost-effective, monitoring programs. This General Permit allows facility operators to submit alternative monitoring programs for approval by the Regional Water Board. For individual facilities, these proposals must be facility specific and demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness. Facility operators with similar industrial activities may also propose alternative monitoring programs for approval by the Regional Water Boards. These proposals must demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness for all of the participating facilities.

Facility operators shall continue to comply with the existing monitoring program requirements until receiving approval by the Regional Water Board.

Group Monitoring

Each facility operator may either perform sampling and analysis individually or participate in a group monitoring program. A group monitoring program may be developed either by a group leader representing a group of similar facilities or by a local agency which holds a storm water permit for a municipal separate storm sewer system for industrial facilities within its jurisdiction. The group leader or local agency responsible for the group monitoring program must schedule all participating facilities to sample two storm events over the life of this General Permit. Facility operators subject to Federal effluent limitations guidelines in 40 CFR Subchapter N must individually sample and analyze for pollutants listed in the appropriate Federal regulations.

Participants within a group may be located within the jurisdiction of more than one Regional Water Board. Multi-Regional Water Board groups must receive the approval of the State Water Board Executive Director (with the concurrence of the appropriate Regional Water Boards).

Each group leader or local agency responsible for group sampling must: (1) provide guidance or training so that the monitoring is done correctly, (2) recommend appropriate BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges from group participants, (3) evaluate and report the monitoring data to the State Water Board and/or the appropriate Regional Water Board(s), and (4) conduct two on-site inspections at each facility over the five year term of this General Permit to evaluate facility compliance and recommend BMPs to achieve compliance with this General Permit. The group leader or local agency may designate, hire, or train inspectors to conduct these inspections that are or are not directly affiliated with the group leader or local agency. It is the group leader's or local agency's responsibility to select inspectors that are capable of evaluating each facility's compliance with the General Permit and can recommend appropriate BMPs. All group monitoring plans are subject to State Water Board and/or Regional Water Board(s) review. Consistent with the four-tier permitting strategy described in the Federal regulations, the Regional Water Board(s) may evaluate the data and results from group monitoring to establish future permitting decisions. As appropriate, the State Water Board and/or the Regional Water Board(s) may terminate or require substantial amendment to the group monitoring plans. The State Water Board and/or the Regional Water Board(s) may terminate a facility's participation in group monitoring or require additional monitoring activities.

Retention of Records

The facility operator is required to retain records of all monitoring information, copies of all reports required by this General Permit, and records of all data used to complete the NOI for a period of five years from the date of measurement, report, or monitoring activity. This period may be extended by the State and/or Regional Water Boards. All records are public documents and must be provided to the Regional Water Boards on request.

Watershed Management

The State and Regional Water Boards are undertaking a focussed effort in watershed management throughout the State. In reissuing this General Permit, the State Water Board recognizes both the evolving nature of watershed management and the long-term desirability of structuring monitoring programs to support the Watershed Management Initiative. Therefore, the amended monitoring and reporting provisions provide flexibility for individual facility operators or groups of facility operators to propose and participate in, subject to Regional Water Board approval, watershed monitoring programs in lieu of some or all of the monitoring requirements contained in this General Permit.

Facility Operator Compliance Responsibilities

This General Permit has been written to encourage individual facility operators to develop their own SWPPP and monitoring programs. Many facility operators, however, choose to obtain compliance assistance either by hiring a consultant on an individual basis or by participating in a group monitoring plan. Regardless of how a facility operator chooses to pursue compliance, it is the facility operator that is responsible for compliance with this General Permit.

The State Water Board recognizes that industrial activities and operating conditions at many facilities change over time. In addition, new and more effective BMPs are being developed by various facility operators and by industrial groups. The SWPPP and monitoring program requirements include various inspections, reviews, and observations all of which recognize, encourage, and mandate an iterative self-evaluation process that is necessary to consistently comply with this General Permit. In general, facility operators that develop and implement SWPPPs that comply with this General Permit should not be penalized when discovering minor violations through this iterative self-evaluation process. The General Permit provides facility operators up to 90 days to revise and implement the SWPPP to correct such violations.

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS) FOR DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES EXCLUDING CONSTRUCTION ACTIVITIES

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations [CFR] Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.

3. To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

instructions, and appropriate annual fee to the State Water Board. This includes facility operators that have participated in U.S. EPA's group application process.

4. This General Permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and authorized non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law.

5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverage under the subsequent NPDES general permit.

6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act (CWA), as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.

7. This action to adopt an NPDES general permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.

8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.

9. For facilities which do not have established effluent limitation guidelines for storm water discharges in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits."

10. Facility operators are required to comply with the terms and conditions of this General Permit. Compliance with the terms and conditions of this General Permit constitutes compliance with BAT/BCT requirements and with requirements to achieve water quality standards. This includes the development and implementation of an effective Storm Water

Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges.

11. Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.

12. The State Water Board has adopted a Watershed Management Initiative that encourages watershed management throughout the State. This General Permit recognizes the Watershed Management Initiative by supporting the development of watershed monitoring programs authorized by the Regional Water Boards.

13. Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions.

14. Following public notice in accordance with State and Federal laws and regulations, the State Water Board held a public hearing on November 12, 1996 and heard and considered all comments pertaining to this General Permit. A response to all significant comments has been prepared and is available for public review.

15. This Order is an NPDES General Permit in compliance with Section 402 of the CWA and shall take effect upon adoption by the State Water Board.

16. All terms that are defined in the CWA, U.S. EPA storm water regulations and the Porter-Cologne Water Quality Control Act will have the same definition in this General Permit unless otherwise stated.

IT IS HEREBY ORDERED that all facility operators required to be regulated by this General Permit shall comply with the following:

A. DISCHARGE PROHIBITIONS:

1. Except as allowed in Special Conditions (D.1.) of this General Permit, materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.

2. Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS:

1. Storm water discharges from facilities subject to storm water effluent limitation guidelines in Federal regulations (40 CFR Subchapter N) shall not exceed the specified effluent limitations.

2. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

3. Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT/BCT constitutes compliance with this requirement.

C. RECEIVING WATER LIMITATIONS:

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan.

3. A facility operator will not be in violation of Receiving Water Limitation C.2. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:

   a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality

standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

4. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;

b. Submit a report that is approved by the Regional Water Board; or

c. Revise its SWPPP and monitoring program as required by the approved report.

D. SPECIAL CONDITIONS

1. Non-Storm Water Discharges

a. The following non-storm water discharges are authorized by this General Permit provided that they satisfy the conditions specified in Paragraph b. below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back into the sea water source.

b. The non-storm water discharges as provided in Paragraph a. above are authorized by this General Permit if all the following conditions are met:

i. The non-storm water discharges are in compliance with Regional Water Board requirements.

ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.

iii. BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.

iv. The non-storm water discharges do not contain significant quantities of pollutants.

v. The monitoring program includes quarterly visual observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective.

vi. The non-storm water discharges are reported and described annually as part of the annual report.

c. The Regional Water Board or its designee may establish additional monitoring programs and reporting requirements for any non-storm water discharge authorized by this General Permit.

d. Discharges from firefighting activities are authorized by this General Permit and are not subject to the conditions of Paragraph b. above.

E. PROVISIONS

1. All facility operators seeking coverage by this General Permit must submit an NOI for each of the facilities they operate. Facility operators filing an NOI after the adoption of this General Permit shall use the NOI form and instructions (Attachment 3) attached to this General Permit. Existing facility operators who have filed an NOI pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall submit an abbreviated NOI form provided by the State Water Board. The abbreviated NOI form shall be submitted within 45 days of receipt.

2. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in accordance with Section A of this General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement

an SWPPP in accordance with Section A of this General Permit when the industrial activities begin.

3. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing Monitoring Program and shall implement any necessary revisions to their Monitoring Program in accordance with Section B of the General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement a Monitoring Program in accordance with Section B of this General Permit when industrial activities begin.

4. Facility operators of feedlots as defined in 40 CFR Part 412 that are in full compliance with Section 2560 to Section 2565, Title 23, California Code of Regulations (Chapter 15) will be in compliance with all effluent limitations and prohibitions contained in this General Permit. Facility operators of feedlots that comply with Chapter 15, however, must perform monitoring in compliance with the requirements of Section B.4.d. and B.14. of this General Permit. Facility operators of feedlots must also comply with any Regional Water Board WDRs or NPDES general permit regulating their storm water discharges.

5. All facility operators must comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding storm water discharges and non-storm water discharges entering storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Boards to local agencies.

6. All facility operators must comply with the standard provisions and reporting requirements for each facility covered by this General Permit contained in Section C, Standard Provisions.

7. Facility operators that operate facilities with co-located industrial activities (facilities that have industrial activities that meet more than one of the descriptions in Attachment 1) that are contiguous to one another are authorized to file a single NOI to comply with the General Permit. Storm water discharges

and authorized non-storm water discharges from the co-located industrial activities are authorized if the SWPPP and Monitoring Program addresses each co-located industrial activity.

8. Upon reissuance of a successor NPDES general permit by the State Water Board, the facility operators subject to this reissued General Permit may be required to file an NOI.

9. Facility operators may request to terminate their coverage under this General Permit by filing a Notice of Termination (NOT) with the Regional Water Board. The NOT shall provide all documentation requested by the Regional Water Board. The facility operator will be notified when the NOT has been approved. Should the NOT be denied, facility operators are responsible for continued compliance with the requirements of this General Permit.

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:

    a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and

    b. Comply with the requirements of this General Permit no later than August 1, 1997.

11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.

12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any

applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.

13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:

   a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.

   b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.

3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.

4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and

Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Administrative Assistant to the Board

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. *Planning and Organization*

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. *Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

{PRIVATE } **PLANNING AND ORGANIZATION**

*Form Pollution Prevention Team
*Review other plans

↓

ASSESSMENT PHASE

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify non-storm water discharges
*Assess pollutant Risks

↓

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

*Non-structural BMPs
*Structural BMPs
*Select activity and site-specific BMPs

↓

IMPLEMENTATION PHASE

*Train employees
*Implement BMPs
*Conduct recordkeeping and reporting

↓

EVALUATION / MONITORING

*Conduct annual site evaluation
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. *List of Significant Materials*

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. *Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302)

that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and

potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

7. *Assessment of Potential Pollutant Sources*

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

8. *Storm Water Best Management Practices*

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B
EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES
SUMMARY

{PRIVATE }Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to preventive tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques.
		Spills caused by topping off fuel tanks	fuel oil	
		Hosing or washing down fuel area	fuel oil	
		Leaking storage tanks	fuel oil	
		Rainfall running off fueling area, and rainfall running onto and off fueling area	fuel oil	

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. *SWPPP General Requirements*

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. *Implementation Schedule*

Each facility operator shall develop a written monitoring program for each facility covered by this General Permit in accordance with the following schedule:

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement a monitoring program no later than October 1, 1992. Facility operators beginning operations after October 1, 1992 shall develop and implement a monitoring program when the industrial activities begin.

b. Facility operators that submitted a Notice Of Intent (NOI) pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing monitoring program and implement any necessary revisions to their monitoring program in a timely manner, but in no case later than August 1, 1997. These facility operators may use the monitoring results conducted in accordance with those expired general permits to satisfy the pollutant/parameter reduction requirements in Section B.5.c., Sampling and Analysis Exemptions and Reduction certifications in Section B.12., and Group Monitoring Sampling credits in B.15.k. For facilities beginning industrial activities after the adoption of this General Permit, the monitoring program shall be developed and implemented when the facility begins the industrial activities.

2. *Objectives*

The objectives of the monitoring program are to:

a. Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in this General Permit.

b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

c. Aid in the implementation and revision of the SWPPP required by Section A of this General Permit.

d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Water Board inspectors.

3. *Non-storm Water Discharge Visual Observations*

a. Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges;

b. Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources;

c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours[1]. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. Facility operators shall conduct quarterly visual observations within 6-18 weeks of each other.

d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

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[1] "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

4. *Storm Water Discharge Visual Observations*

   a. With the exception of those facilities described in Section B.4.d. below, facility operators shall visually observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release.

   b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days[2] without storm water discharges and that occur during scheduled facility operating hours.

   c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

   d. Feedlots (subject to Federal effluent limitations guidelines in 40 Code of Federal Regulations [CFR] Part 412) that are in compliance with Sections 2560 to 2565, Article 6, Chapter 15, Title 23, California Code of Regulations, and facility operators with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. *Sampling and Analysis*

   a. Facility operators shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored

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[2] Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

or contained storm water is released. Facility operators that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the Annual Report why the first storm event was not sampled.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.

c. The samples shall be analyzed for:

i. Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC; and

ii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and

iii. Other analytical parameters as listed in Table D (located at the end of this Section). These parameters are dependent on the facility's standard industrial classification (SIC) code. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of this General Permit, and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation of the facilities industrial activities, potential pollutant sources, and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.

iv. Other parameters as required by the Regional Water Board.

6. *Facilities Subject to Federal Storm Water Effluent Limitation Guidelines*

Facility operators with facilities subject to Federal storm water effluent limitation guidelines, in addition to the requirements in Section B.5. above, must complete the following:

a. Collect and analyze two samples for any pollutant specified in the appropriate category of 40 CFR Subchapter N. The sampling and analysis exemptions and reductions described in Section B.12. of this General Permit do not apply to these pollutants.

b. Estimate or calculate the volume of storm water discharges from each drainage area;

c. Estimate or calculate the mass of each regulated pollutant as defined in the appropriate category of 40 CFR Subchapter N; and

d. Identify the individual(s) performing the estimates or calculations in accordance with Subsections b. and c. above.

7. *Sample Storm Water Discharge Locations*

a. Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.

b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), facility operators shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.

d. Facility operators that determine that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (i) collect samples from a reduced number of substantially identical

drainage areas, or (ii) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the annual report.

8. *Visual Observation and Sample Collection Exceptions*

Facility operators are required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season until the minimum requirements of Sections B.4. and B.5. are completed with the following exceptions:

a. A facility operator is not required to collect a sample and conduct visual observations in accordance with Section B.4 and Section B.5 due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. Facility operators that do not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the Annual Report why the sampling or visual observations could not be conducted.

b. A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of this Section will be better satisfied. The facility operator shall include an explanation in the Annual Report why the visual observations and sample collection should be conducted after the first hour of discharge.

9. *Alternative Monitoring Procedures*

Facility operators may propose an alternative monitoring program that meets Section B.2 monitoring program objectives for approval by the Regional Water Board. Facility operators shall continue to comply with the monitoring requirements of this Section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Water Board. Alternative monitoring plans are subject to modification by the Regional Water Boards.

10. *Monitoring Methods*

a. Facility operators shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section B.2. This shall include:

i. Rationale and description of the visual observation methods, location, and frequency.

ii. Rationale and description of the sampling methods, location, and frequency; and

iii. Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.

b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. All metals shall be reported as total metals. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

11. *Inactive Mining Operations*

Inactive mining operations are defined in Attachment 1 of this General Permit. Where comprehensive site compliance evaluations, non-storm water discharge visual observations, storm water discharge visual observations, and storm water sampling are impracticable, facility operators of inactive mining operations may instead obtain certification once every three years by a Registered Professional Engineer that an SWPPP has been prepared for the facility and is being implemented in accordance with the requirements of this General Permit. By means of these certifications, the Registered Professional Engineer having examined the facility and being familiar with the provisions of this General Permit shall attest that the SWPPP has been prepared in accordance with good engineering practices. Facility operators of mining operations who cannot obtain a certification because of noncompliance must notify the appropriate Regional Water Board and, upon request, the local agency which receives the storm water discharge.

12. *Sampling and Analysis* Exemptions and Reductions

A facility operator who qualifies for sampling and analysis exemptions, as described below in Section B.12.a.i., or who qualifies for reduced sampling and analysis, as described below in Section B.12.b., must submit the appropriate certifications and required documentation to the Regional Water Boards prior to the wet season (October 1) and recertify as part of the Annual Report submittal. A facility operator that qualifies for either the Regional Water Board or local agency certification programs, as described below in Section B.12.a.ii. and iii., shall submit certification and documentation in accordance with the requirements of those programs. Facility operators who provide certifications in accordance with this Section are still required to comply with all other monitoring program and reporting requirements. Facility operators shall prepare and submit their certifications using forms and instructions provided by the State Water Board, Regional Water Board, or local agency or shall submit their information on a form that contains equivalent information. Facility operators whose facility no longer meets the certification conditions must notify the Regional Water Boards (and local agency) within 30 days and immediately comply with the Section B.5. sampling and analysis requirements. Should a Regional Water Board (or local agency) determine that a certification does not meet the conditions set forth below, facility operators must immediately comply with the Section B.5. sampling and analysis requirements.

a. Sampling and Analysis Exemptions

A facility operator is not required to collect and analyze samples in accordance with Section B.5. if the facility operator meets all of the conditions of one of the following certification programs:

i. No Exposure Certification (NEC)

This exemption is designed primarily for those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to storm water. To qualify for this exemption, facility operators must certify that their facilities meet all of the following conditions:

(1) All prohibited non-storm water discharges have been eliminated or otherwise permitted.

(2) All authorized non-storm water discharges have been identified and addressed in the SWPPP.

(3) All areas of past exposure have been inspected and cleaned, as appropriate.

(4) All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

(5) All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

(6) There is no exposure of storm water to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and particulates.

(7) There is periodic re-evaluation of the facility to ensure conditions (1), (2), (4), (5), and (6) above are continuously met. At a minimum, re-evaluation shall be conducted once a year.

ii. Regional Water Board Certification Programs

The Regional Water Board may grant an exemption to the Section B.5. Sampling and Analysis Requirements if it determines a facility operator has met the conditions set forth in a Regional Water Board

certification program. Regional Water Board certification programs may include conditions to (1) exempt facility operators whose facilities infrequently discharge storm water to waters of the United States, and (2) exempt facility operators that demonstrate compliance with the terms and conditions of this General Permit.

iii. Local Agency Certifications

A local agency may develop a local agency certification program. Such programs must be approved by the Regional Water Board. An approved local agency program may either grant an exemption

from the Section B.5. Sampling and Analysis Requirements or reduce the frequency of sampling if it determines that a facility operator has demonstrated compliance with the terms and conditions of this General Permit.

b. Sampling and Analysis Reduction

i. A facility operator may reduce the number of sampling events required to be sampled for the remaining term of this General Permit if the facility operator provides certification that the following conditions have been met:

(1) The facility operator has collected and analyzed samples from a minimum of six storm events from all required drainage areas;

(2) All prohibited non-storm water discharges have been eliminated or otherwise permitted;

(3) The facility operator demonstrates compliance with the terms and conditions of the General Permit for the previous two years (i.e., completed Annual Reports, performed visual observations, implemented appropriate BMPs, etc.);

(4) The facility operator demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and

(5) Conditions (2), (3), and (4) above are expected to remain in effect for a minimum of one year after filing the certification.

ii. Unless otherwise instructed by the Regional Water Board, facility operators shall collect and analyze samples from two additional storm events (or one additional storm event when certification filed for the wet season beginning October 1, 2001) during the remaining term of this General Permit in accordance with Table C below. Facility operators shall collect samples of the first storm event of the wet season. Facility operators that do not collect samples from the first storm event of the wet season shall collect samples from another storm event during the same wet season. Facility operators that do not collect a sample in a required wet season shall collect the sample from another storm event in the next wet season. Facility operators shall explain in the Annual Report why the first storm event of a wet season was not sampled or a sample was not taken from any storm event in accordance with the Table C schedule.

Table C
REDUCED MONITORING SAMPLING SCHEDULE

{PRIVATE }Facility Operator Filing Sampling Reduction Certification By	Samples Shall be Collected and Analyzed in These Wet Seasons	
	Sample 1	Sample 2
Oct. 1, 1997	Oct. 1, 1997-May 31, 1998	Oct. 1, 1999-May 31, 2000
Oct. 1, 1998	Oct. 1, 1998-May 31, 1999	Oct. 1, 2000-May 31, 2001
Oct. 1, 1999	Oct. 1, 1999-May 31, 2000	Oct. 1, 2001-May 31, 2002
Oct. 1, 2000	Oct. 1, 2000-May 31, 2001	Oct. 1, 2001-May 31, 2002
Oct. 1, 2001	Oct. 1, 2001-May 31, 2002	-

13. *Records*

Records of all storm water monitoring information and copies of all reports (including the Annual Reports) required by this General Permit shall be retained for a period of at least five years. These records shall include:

a. The date, place, and time of site inspections, sampling, visual observations, and/or measurements;

b. The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;

c. Flow measurements or estimates (if required by Section B.6);

d. The date and approximate time of analyses;

e. The individual(s) who performed the analyses;

f. Analytical results, method detection limits, and the analytical techniques or methods used;

g. Quality assurance/quality control records and results;

h. Non-storm water discharge inspections and visual observations and storm water discharge visual observation records (see Sections B.3. and 4.);

i. Visual observation and sample collection exception records (see Section B.5.a, 7.d, 8, and 12.b.ii.);

j. All calibration and maintenance records of on-site instruments used;

k. All Sampling and Analysis Exemption and Reduction certifications and supporting documentation (see Section B.12);

l. The records of any corrective actions and follow-up activities that resulted from the visual observations.

14. *Annual Report*

All facility operators shall submit an Annual Report by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the area in which the facility is located and to the local agency (if requested).

The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report required in Section A.9., an explanation of why a facility did not implement any activities required by the General Permit (if not already included in the Evaluation Report), and records specified in Section B.13.i. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit." The Annual Report shall be signed and certified in accordance with Standard Provisions 9. and 10. of Section C of this General Permit. Facility operators shall prepare and submit their Annual Reports using the annual report forms provided by the State Water Board or Regional Water Board or shall submit their information on a form that contains equivalent information.

15. *Group Monitoring*

Facility operators may participate in group monitoring as described below. A facility operator that participates in group monitoring shall develop and implement a written site-specific SWPPP and monitoring program in accordance with the General Permit and must satisfy any group monitoring

requirements. Group monitoring shall be subject to the following requirements:

a. A group monitoring plan (GMP) shall be developed and implemented by a group leader representing a group of similar facility operators regulated by this General Permit or by a local agency which holds an NPDES permit (local agency permittee) for a municipal separate storm sewer system. GMPs with participants that discharge storm water within the boundaries of a single Regional Water Board shall be approved by that Regional Water Board. GMPs with participants that discharge storm water within the boundaries of multiple Regional Water Boards shall be approved by the State Water Board. The State Water Board and/or Regional Water Board(s) may disapprove a facility's participation in a GMP or require a GMP participant to conduct additional monitoring activities.

b. Each GMP participant shall collect and analyze samples from at least two storm events in accordance with Section B.5. over the five-year period of this General Permit. The two storm event minimum applies to new and existing members. The group leader or local agency permittee shall schedule sampling to meet the following conditions: (i) to evenly distribute the sample collection over the five-year term of this General Permit, and (ii) to collect samples from the two storm events at each participant's facility in different and non-consecutive wet seasons. New participants who join in Years 4 and 5 of this General Permit are not subject to Condition (ii) above. Group leaders shall explain in the annual Group Evaluation Report why any scheduled samples were not collected and reschedule the sampling so that all required samples are collected during the term of this General Permit.

c. The group leader or local agency permittee must have the appropriate resources to develop and implement the GMP. The group leader or local agency permittee must also have the authority to terminate any participant who is not complying with this General Permit and the GMP.

d. The group leader or local agency permittee is responsible for:

   i. Developing, implementing, and revising the GMP;

   ii. Developing and submitting an annual Group Evaluation Report to the State Water Board and/or Regional Water Board by August 1 of each year that includes:

      (1) An evaluation and summary of all group monitoring data,

(2) An evaluation of the overall performance of the GMP participants in complying with this General Permit and the GMP,

(3) Recommended baseline and site-specific BMPs that should be considered by each participant based upon Items (1) and (2) above, and

(4) A copy of each evaluation report and recommended BMPs as required in Section B.15.d.v. below.

iii. Recommending appropriate BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;

iv. Assisting each participant in completing their Annual Comprehensive Site Compliance Evaluation and Annual Report;

v. Conducting a minimum of two on-site inspections of each participant's facility (it is recommended that these inspections be scheduled during the Annual Comprehensive Site Compliance Evaluation) during the term of this General Permit to evaluate the participant's compliance with this General Permit and the GMP, and to recommend any additional BMPs necessary to achieve compliance with this General Permit. Participants that join in Years 4 and 5 shall be scheduled for one evaluation. A copy of the evaluation and recommended BMPs shall be provided to the participants;

vi. Submitting a GMP (or revisions, as necessary), to the appropriate Regional Water Board(s) and State Water Board no later than September 1, 1997 (or August 1 in subsequent years). Once approved, a group leader or local agency permittee shall submit a letter of intent by August 1 of each year to continue the approved GMP. The letter of intent must include a roster of participants, participant's Waste Discharge Identification number (WDID#), updated sampling schedules, and any other revisions to the GMP;

vii. Revising the GMP as instructed by the Regional Water Board or the State Water Board; and

viii. Providing the State Water Board and/or Regional Water Board with quarterly updates of any new or deleted participants and corresponding changes in the sampling and inspection schedule.

e. The GMP shall:

i. Identify the participants of the GMP by name, location, and WDID number;

ii. Include a narrative description summarizing the industrial activities of participants of the GMP and explain why the participants, as a whole, have sufficiently similar industrial activities and BMPs to be covered by a group monitoring plan;

iii. Include a list of typical potential pollutant sources associated with the group participant's facilities and recommended baseline BMPs to prevent or reduce pollutants associated with industrial activity in the storm water discharges and authorized non-storm water discharges;

iv. Provide a five-year sampling and inspection schedule in accordance with Subsections b. and d.v. above.

v. Identify the pollutants associated with industrial activity that shall be analyzed at each participant's facility in accordance with Section B.5. The selection of these pollutants shall be based upon an assessment of each facility's potential pollutant sources and likelihood that pollutants associated with industrial activity will be present in storm water discharges and authorized non-storm water discharges in significant quantities.

f. Sampling and analysis shall be conducted in accordance with the applicable requirements of this Section.

g. Unless otherwise instructed by the Regional Water Board or the State Water Board Executive Director, the GMPs shall be implemented at the beginning of the wet season (October 1).

h. All participants in an approved GMP that have not been selected to sample in a particular wet season are required to comply with all other monitoring program and reporting requirements of this Section including the submittal of an Annual Report by July 1 of each year to the appropriate Regional Water Board.

i. GMP participants subject to Federal storm water effluent limitation guidelines must perform the monitoring described in Section B.6. and submit the results of the monitoring to the appropriate Regional Water Board within the facility operator's Annual Report.

j. GMPs and Group Evaluation Reports should be prepared in accordance with State Water Board (or Regional Water Board) guidance.

k. GMP participants may receive Sampling and Analysis Reduction sampling credit in accordance with the following conditions:

i. Current or prior participants (group participants) of approved GMPs, who have not collected and analyzed samples from six storm events as required in Section B.7.b.i.(1), may substitute credit earned through participation in a GMP for up to four of the six required storm events. Credits for GMP participation shall be calculated as follows:

(1) Credit may only be earned in years of participation where the GMP participant was not scheduled to sample and the GMP was approved.

(2) One credit will be earned for each year of valid GMP participation.

(3) One additional credit may be earned for each year the overall GMP sample collection performance is greater than 75 percent.

ii. GMP participants substituting credit as calculated above shall provide proof of GMP participation and certification that all the conditions in Section B.12.b.i. have been met. GMP participants substituting credit in accordance with Section B.15.k.i.(3) shall also provide GMP sample collection performance documentation.

iii. GMP participants that qualify for Sampling and Analysis Reduction and have already sampled a storm event after October 1, 1997 shall only be required to sample one additional storm event during the remainder of this General Permit in accordance with the "Sample 2" schedule (or "Sample 1" schedule when certification filed for the wet season beginning October 1, 2001) in Table C of this Section.

n. Group leaders shall furnish, within 60 days of receiving a request from the State Water Board or Regional Water Board, any GMP information and documentation necessary to verify the Section B.15.k. sampling credits. Group leaders may also provide this information and documentation to the group participants.

16. *Watershed Monitoring Option*

Regional Water Boards may approve proposals to substitute watershed monitoring for some or all of the requirements of this Section if the Regional Water Board finds that the watershed monitoring will provide substantially similar monitoring information in evaluating facility operator compliance with the requirements of this General Permit.

TABLE D
ADDITIONAL ANALYTICAL PARAMETERS

Subsector	SIC	Activity Represented	Parameters
SECTOR A. TIMBER PRODUCTS			
A1	2421	General Sawmills and Planing Mills	**COD;TSS;Zn**
A2	2491	Wood Preserving	**As;Cu**
A3	2411	Log Storage and Handling	**TSS**
A4	2426	Hardwood Dimension and Flooring Mills	**COD;TSS**
A4	2429	Special Product Sawmills, Not Elsewhere Classified	**COD;TSS**
A4	243X	Millwork, Veneer, Plywood, and Structural Wood	**COD;TSS**
A4	(except 2434--Wood Kitchen Cabinet Manufacturers)		
A4	244X	Wood Containers	**COD;TSS**
A4	245X	Wood Buildings and Mobile Homes	**COD;TSS**
A4	2493	Reconstituted Wood Products	**COD;TSS**
A4	2499	Wood Products, Not Elsewhere Classified	
SECTOR B. PAPER AND ALLIED PRODUCTS MANUFACTURING			
B1	261X	Pulp Mills	
B2	262X	Paper Mills	
B3	263X	Paperboard Mills	**COD**
B4	265X	Paperboard Containers and Boxes	
B5	267X	Converted Paper and Paperboard Products, Except Containers and Boxes	
SECTOR C. CHEMICAL AND ALLIED PRODUCTS MANUFACTURING			
C1	281X	Industrial Inorganic Chemicals	**Al;Fe;N+N**
C2	282X	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic, and Other Manmade Fibers Except Glass	**Zn**
C3	283X	Drugs	
C4	284X	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations	**N+N;Zn**
C5	285X	Paints, Varnishes, Lacquers, Enamels, and Allied Products	
C6	286X	Industrial Organic Chemicals	
C7	287X	Nitrogenous and Phosphatic Basic Fertilizers, Mixed Fertilizer, Pesticides, and Other Agricultural Chemicals	**Fe;N+N;Pb;Zn;P**
C8	289X	Miscellaneous Chemical Products	
	3952	Inks and Paints, Including China Painting Enamels, India Ink, (limited to list) Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints, and Artist's Watercolors	
SECTOR D. ASPHALT PAVING/ROOFING MATERIALS MANUFACTURERS AND LUBRICANT MANUFACTURERS			
D1	295X	Asphalt Paving and Roofing Materials	**TSS**
D2	2992	Lubricating Oils and Greases	

Parameter Names

Al - Aluminum	Cd - Cadmium	Cu - Copper	Mg - Magnesium	BOD - Biochemical Oxygen Demand
As - Arsenic	CN - Cyanide	Fe - Iron	Ag - Silver	N + N - Nitrate & Nitrite Nitrogen
NH_3- Ammonia	Hg - Mercury	P - Phosphorus	Se - Selenium	Pb - Lead
Zn - Zinc	TSS -Total Suspended Solids	COD - Chemical Oxygen Demand		

Subsector	SIC	Activity Represented	Parameter

SECTOR E. GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCT MANUFACTURING			
E1	3211	Flat Glass	
E1	322X	Glass and Glassware, Pressed or Blown	
E1	323X	Glass Products Made of Purchased Glass	
E2	3241	Hydraulic Cement	
E3	325X	Structural Clay Products	**Al**
E3	326X	Pottery and Related Products	**Al**
E3	3297	Non-Clay Refractories	**Al**
E4	327X	Concrete, Gypsum, and Plaster Products (Except Lime) (except 3274).	**TSS;Fe**
E4	3295	Minerals and Earths, Ground, or Otherwise Treated	**TSS;Fe**
SECTOR F. PRIMARY METALS			
F1	331X	Steel Works, Blast Furnaces, Rolling & Finishing Mill	**Al;Zn**
F2	332X	Iron and Steel Foundries	**Al;TSS;Cu;Fe;Zn**
F3	333X	Primary Smelting and Refining of Nonferrous Metals	
F4	334X	Secondary Smelting and Refining of Nonferrous Metals	
F5	335X	Rolling, Drawing, and Extruding of Nonferrous Metals	**Cu;Zn**
F6	336X	Nonferrous Foundries (Castings)	**Cu;Zn**
F7	339X	Miscellaneous Primary Metal Products	
SECTOR G. METAL MINING (ORE MINING AND DRESSING) EXCEPT INACTIVE METAL MINING ACTIVITIES ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED			
G1	101X	Iron Ores	
G2	102X	Copper Ores	**TSS;COD;N+N**
G3	103X	Lead and Zinc Ores	
G4	104X	Gold and Silver Ores	
G5	106X	Ferroalloy Ores, Except Vanadium	
G6	108X	Metal Mining Services	
G7	109X	Miscellaneous Metal Ores	
SECTOR H. COAL MINES AND COAL MINING-RELATED FACILITIES			
NA	12XX	Coal Mines and Coal Mining-Related Facilities	**TSS;Al;Fe**
SECTOR I. COAL MINES AND COAL MINING-RELATED FACILITIES			
I1	131X	Crude Petroleum and Natural Gas	
I2	132X	Natural Gas Liquids	
I3	138X	Oil and Gas Field Services	
SECTOR J. MINERAL MINING AND DRESSING EXCEPT INACTIVE MINERAL MINING ACTIVITIES OCCURRING ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED			
J1	141X	Dimension Stone	**TSS**
J1	142X	Crushed and Broken Stone, Including Rip Rap	**TSS**
J1	148X	Nonmetallic Minerals, Except Fuels	**TSS**
J2	144X	Sand and Gravel	**TSS;N+N**
J3	145X	Clay, Ceramic, and Refractory Materials	
J4	147X	Chemical and Fertilizer Mineral Mining	
J4	149X	Miscellaneous Nonmetallic Minerals, Except Fuels	

Subsector	SIC	Activity Represented	Parameters
SECTOR K. HAZARDOUS WASTE TREATMENT STORAGE OR DISPOSAL FACILITIES			
NA	4953	Hazardous Waste Treatment Storage or Disposal	**NH_3;Mg;COD;As Cd;CN;Pb Hg;Se;Ag**
SECTOR L. LANDFILLS AND LAND APPLICATION SITES			
NA	4953	Landfills and Land Application Sites That Receive or Have Received Industrial Wastes, Except Inactive Landfills or Land Applications Sites Occurring on Federal Lands Where an Operator Cannot be Identified	**TSS;Fe**
SECTOR M. AUTOMOBILE SALVAGE YARDS			
NA	5015	Facilities Engaged in Dismantling or Wrecking Used Motor Vehicles for Parts Recycling or Resale and for Scrap	**TSS;Fe;Pb;Al**
SECTOR N. SCRAP RECYCLING FACILITIES			
NA	5093	Processing, Reclaiming, and Wholesale Distribution of Scrap and Waste Materials	**TSS;Fe;Pb Al;Cu;Zn;COD**
SECTOR O. STEAM ELECTRIC GENERATING FACILITIES			
NA	4911	Steam Electric Power Generating Facilities	**Fe**
SECTOR P. LAND TRANSPORTATION FACILITIES THAT HAVE VEHICLE AND EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
P1	40XX	Railroad Transportation	
P2	41XX	Local and Highway Passenger Transportation	
P3	42XX	Motor Freight Transportation and Warehousing	
P4	43XX	United States Postal Service	
P5	5171	Petroleum Bulk Stations and Terminals	
SECTOR Q. WATER TRANSPORTATION FACILITIES THAT HAVE VEHICLE (VESSEL) & EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
NA	44XX	Water Transportation	**Al;Fe;Pb;Zn**
SECTOR R. SHIP AND BOAT BUILDING OR REPAIRING YARDS			
NA	373X	Ship and Boat Building or Repairing Yards	
SECTOR S. AIR TRANSPORTATION FACILITIES			
NA	45XX	Air Transportation Facilities That Have Vehicle Maintenance Ships, Material Handing Facilities, Equipment Cleaning Operations, or Airport and/or Aircraft Deicing/Anti-icing Operations	**BOD;COD;NH_3;pH**

Subsector	SIC	Activity Represented	Parameters
SECTOR T. TREATMENT WORKS			
NA	4952	Treatment Works Treating Domestic Sewage or Any Other Sewage Sludge or Wastewater Treatment Device or System Used in the Storage, treatment, recycling, or Reclamation of Municipal or Domestic Sewage with a Design Flow of 1.0 MGD or More or Required to Have an Approved Pretreatment Program	
SECTOR U. FOOD AND KINDRED PRODUCTS			
U1	201X	Meat Products	
U2	202X	Dairy Products	
U3	203X	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties	
U4	204X	Grain Mill Products	**TSS**
U5	205X	Bakery Products	
U6	206X	Sugar and Confectionery Products	
U7	207X	Fats and Oils	**BOD;COD;TSS;N+N**
U8	208X	Beverages	
U9	209X	Miscellaneous Food Preparations and Kindred Products	
NA	21XX	Tobacco Products	
SECTOR V. TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING			
	22XX	Textile Mill Products	
V2	23XX	Apparel and Other Finished Products Made From Fabrics and Similar Materials	
SECTOR W. FURNITURE AND FIXTURES			
NA	25XX	Furniture and Fixtures	
NA	2434	Wood Kitchen Cabinets	
SECTOR X. PRINTING AND PUBLISHING			
NA	2732	Book Printing	
NA	2752	Commercial Printing, Lithographic	
NA	2754	Commercial Printing, Gravure	
NA	2759	Commercial Printing, Nor Elsewhere Classified	
NA	2796	Platemaking and Related Services	
SECTOR Y. RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISC. MANUFACTURING INDUSTRIES			
Y1	301X	Tires and Inner Tubes	**Zn**
Y1	302X	Rubber and Plastics Footwear	**Zn**
Y1	305X	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting	**Zn**
Y1	306X	Fabricated Rubber Products, Not Elsewhere Classified	**Zn**
Y2	308X	Miscellaneous Plastics Products	

Subsector	SIC	Activity Represented	Parameters
Y2	393X	Musical Instruments	
Y2	394X	Dolls, Toys, Games, and Sporting and Athletic Goods	
Y2	395X	Pens, Pencils, and Other Artists' Materials	
Y2	396X	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal	
Y2	399X	Miscellaneous Manufacturing Industries	
SECTOR Z. LEATHER TANNING AND FINISHING			
NA	311X	Leather Tanning and Finishing	
NA	NA	Facilities that Make Fertilizer Solely From Leather Scraps and Leather Dust	
SECTOR AA. FABRICATED METAL PRODUCTS			
AA1	3429	Hardware, Not Elsewhere Classified	**Zn;N+N;Fe;Al**
AA1	3441	Fabricated Structural Metal	**Zn;N+N;Fe;Al**
AA1	3442	Metal Doors, Sash, Frames, Molding, and Trim	**Zn;N+N;Fe;Al**
AA1	3443	Fabricated Plate Work (Boiler Shops)	**Zn;N+N;Fe;Al**
AA1	3444	Sheet Metal Work	**Zn;N+N;Fe;Al**
AA1	3451	Screw Machine Products	**Zn;N+N;Fe;Al**
AA1	3452	Bolts, Nuts, Screws, Rivets, and Washers	**Zn;N+N;Fe;Al**
AA1	3462	Iron and Steel Forgings	**Zn;N+N;Fe;Al**
AA1	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring	**Zn;N+N;Fe;A**
AA1	3494	Valves and Pipe Fittings, Not Elsewhere Classified	**Zn;N+N;Fe;Al**
AA1	3496	Miscellaneous Fabricated Wire Products	**Zn;N+N;Fe;Al**
AA1	3499	Fabricated Metal Products, Not Elsewhere Classified	**Zn;N+N;Fe;Al**
AA1	391X	Jewelry, Silverware, and Plated Ware	**Zn;N+N;Fe;Al**
AA2	3479	Coating, Engraving, and Allied Services	**Zn;N+N**
SECTOR AB. TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY			
NA	35XX	Industrial and Commercial Machinery (except 357X Computer and Office Equipment)	
NA	37XX	Transportation Equipment (except 373X Ship and Boat Building and Repairing	
SECTOR AC. ELECTRONIC, ELECTRICAL. PHOTOGRAPHIC, AND OPTICAL GOODS			
NA	36XX	Electronic and Other Electrical Equipment and Components, Except Computer Equipment	
NA	38XX	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks	
NA	357X	Computer and Office Equipment	

Section C: STANDARD PROVISIONS

1. Duty to Comply

The facility operator must comply with all of the conditions of this General Permit. Any General Permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for (a) enforcement action for (b) General Permit termination, revocation and reissuance, or modification or (c) denial of a General Permit renewal application.

The facility operator shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the facility operator for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the facility operator so notified.

3. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a facility operator in an enforcement action that it would have been necessary to halt or reduce the general permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The facility operator shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The facility operator at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the facility operator to achieve compliance with the conditions of this General Permit and with the requirements of storm water pollution prevention plans (SWPPPs). Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a facility operator when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Duty to Provide Information

The facility operator shall furnish the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), U.S. Environmental Protection Agency (U.S. EPA), or local storm water management agency, within a reasonable time specified by the agencies, any requested information to determine compliance with this General Permit. The facility operator shall also furnish, upon request, copies of records required to be kept by this General Permit.

8. Inspection and Entry

The facility operator shall allow the Regional Water Board, State Water Board, U.S. EPA, and local storm water management agency, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the facility operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this General Permit;

b. Have access to and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge or authorized non-storm water discharge; and

d. Conduct monitoring activities at reasonable times for the purpose of ensuring General Permit compliance.

9. Signatory Requirements

a. All Notices of Intent (NOIs) submitted to the State Water Board shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

b. All reports, certifications, or other information required by the General Permit or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be signed by a person described above or by a duly authorized representative. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above and retained as part of the SWPPP.

(2) The authorization specifies either an individual or a position having responsibility for the

overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for named position.)

(3) If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be attached to the SWPPP prior to submittal of any reports, certifications, or information signed by the authorized representative.

10. Certification

Any person signing documents under Provision 9. above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Reporting Requirements

a. Planned changes: The facility operator shall give advance notice to the Regional Water Board and local storm water management agency of any planned physical alteration or additions to the general permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

b. Anticipated noncompliance: The facility operator will give advance notice to the Regional Water Board and local storm water management agency of any planned changes at the permitted facility which may result in noncompliance with General Permit requirements.

c. Compliance schedules: Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule of this General Permit shall be submitted no later than 14 days following each scheduled date.

d. Noncompliance reporting: The facility operator shall report any noncompliance at the time monitoring reports are submitted. The written submission shall contain (1) a description of the noncompliance and its cause; (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (3) steps taken or planned to reduce and prevent recurrence of the noncompliance.

12. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the facility operator from any responsibilities, liabilities, or penalties to which the facility operator is or may be subject under Section 311 of the CWA.

13. Severability

The provisions of this General Permit are severable; and if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

14. Reopener Clause

This General Permit may be modified, revoked, and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 CFR 122.62, 122.63, 122.64, and 124.5. This General Permit may be reopened to modify the provisions regarding authorized non-storm water discharges specified in Section D. Special Conditions.

15. Penalties for Violations of General Permit Conditions.

a. Section 309 of the CWA provides significant penalties for any person who violates a General Permit condition implementing Sections 301, 302, 306, 307 308, 318, or 405 of the CWA, or any General Permit condition or limitation implementing any such section in a General Permit issued under Section 402. Any person who

violates any General Permit condition of this General Permit is subject to a civil penalty not to exceed $25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties in some cases greater than those under the CWA.

16. Availability

A copy of this General Permit shall be maintained at the facility and be available at all times to the appropriate facility personnel and to Regional Water Board and local agency inspectors.

17. Transfers

This General Permit is not transferable from one facility operator to another facility operator nor may it be transferred from one location to another location. A new facility operator of an existing facility must submit an NOI in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit.

18. Continuation of Expired General Permit

This General Permit continues in force and effect until a new general permit is issued or the State Water Board rescinds the General Permit. Facility operators authorized to discharge under the expiring general permit are required to file an NOI to be covered by the reissued General Permit.

19. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or by both.

FACILITIES COVERED BY THIS GENERAL PERMIT

Industrial facilities include Federal, State, municipally owned, and private facilities from the following categories:

1. FACILITIES SUBJECT TO STORM WATER EFFLUENT LIMITATIONS GUIDELINES, NEW SOURCE PERFORMANCE STANDARDS, OR TOXIC POLLUTANT EFFLUENT STANDARDS (40 Code of Federal Regulations (CFR) SUBCHAPTER N). Currently, categories of facilities subject to storm water effluent limitations guidelines are Cement Manufacturing (40 CFR Part 411), Feedlots (40 CFR Part 412), Fertilizer Manufacturing (40 CFR Part 418), Petroleum Refining (40 CFR Part 419), Phosphate Manufacturing (40 CFR Part 422), Steam Electric (40 CFR Part 423), Coal Mining (40 CFR Part 434), Mineral Mining and Processing (40 CFR Part 436), Ore Mining and Dressing (40 CFR Part 440), and Asphalt Emulsion (40 CFR Part 443).

2. MANUFACTURING FACILITIES: Standard Industrial Classifications (SICs) 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, and 373.

3. OIL AND GAS/MINING FACILITIES: SICs 10 through 14 including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l) because of performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act (SMCRA) authority has been released, or except for area of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990); oil and gas exploration, production, processing, or treatment operations; or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mined sites that are not being actively mined but which have an identifiable facility operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES: Includes those operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act (RCRA).

5. LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS: Sites that receive or have received industrial waste from any of the facilities covered by this General Permit, sites subject to regulation under Subtitle D of RCRA, and sites that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance of five acres or more).

6. RECYCLING FACILITIES: SICs 5015 and 5093. These codes include metal scrapyards, battery reclaimers, salvage yards, motor vehicle dismantlers and wreckers, and recycling facilities that are engaged in assembling, breaking up, sorting, and wholesale distribution of scrap and waste material such as bottles, wastepaper, textile wastes, oil waste, etc.

7. STEAM ELECTRIC POWER GENERATING FACILITIES: Includes any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. TRANSPORTATION FACILITIES: SICs 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified herein that are associated with industrial activity.

9. SEWAGE OR WASTEWATER TREATMENT WORKS: Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

10. MANUFACTURING FACILITIES WHERE INDUSTRIAL MATERIALS, EQUIPMENT, OR ACTIVITIES ARE <u>EXPOSED</u> TO STORM WATER: SICs 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-4225.

Attachment 2

STORM WATER CONTACTS FOR THE STATE AND REGIONAL WATER BOARDS

See Storm Water Contacts at:
http://www.swrcb.ca.gov/stormwtr/contact.html

NOTICE OF INTENT (NOI)
INSTRUCTIONS

**TO COMPLY WITH STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001**

Who Must Submit

The facility operator must submit an NOI for each industrial facility that is required by U.S. Environmental Protection Agency (U.S.EPA) regulations to obtain a storm water permit. The required industrial facilities are listed in Attachment 1 of the General Permit and are also listed in 40 Code of Federal Regulations Section 122.26(b)(14).

The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit related activities at the facility.

Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. Landowners may also file an NOI for a facility if the landowner, rather than the facility operator, is responsible for compliance with this General Permit.

How and Where to Apply

The completed NOI form, a site map, and appropriate fee must be mailed to the State Water Resources Control Board (State Water Board) at the following address:

State Water Resources Control Board
Division of Water Quality
P.O. Box 1977
Sacramento, CA 95812-1977
Attn: Storm Water Permitting Unit

Please Note: Do not send the original or copies of the NOI submittal to the Regional Water Quality Control Board (Regional Water Board). The original NOI will be forwarded to the Regional Water Board after processing.

Do not send a copy of your Storm Water Pollution Prevention Plan (SWPPP) with your NOI submittal. Your SWPPP is to be kept on site and made available for review upon request.

When to Apply

Facility operators of existing facilities must file an NOI in accordance with these instructions by March 30, 1992. Facility

operators of new facilities (those beginning operations after March 30, 1992) must file an NOI in accordance with these instructions at least 14 days prior to the beginning of operations.

Once the completed NOI, site map, and appropriate fee have been submitted to the State Water Board, your NOI will be processed and you will be issued a receipt letter with a Waste Discharge Identification (WDID) Number. Please refer to this number when you contact either the State or Regional Water Boards.

Fees

The annual fee is $700. Feedlots pay a one time fee of $2,000 fee. Checks should be made payable to: SWRCB

The permit fee is waived for facilities that currently pay an annual fee for a National Pollutant Discharge Elimination System (NPDES) permit or Waste Discharge Requirement (WDR) permit (see Section XIII of the NOI).

Change of Information

If the information provided on the NOI or site map changes, you should report the changes to the State Water Board using an NOI form. Section I of the line-by-line instructions includes information regarding changes to the NOI.

Questions

If you have any questions completing the NOI, please call the appropriate Regional Water Board (Attachment 2) or the State Water Board at (916) 341-5538.

NOI LINE-BY-LINE INSTRUCTIONS

Please type or print your responses on the NOI. Please complete the NOI form in its entirety and sign the certification.

Section I--NOI STATUS

Check box "A" if this is a new NOI registration.

Check box "B" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID #. Highlight all the information that has been changed.

Please note that a change of information **does not** apply to a change of facility operator or a change in the location of the facility. These changes require a Notice of Termination (NOT) and submittal of a new NOI and annual fee. Contact the State Water

Board or Regional Water Boards for more information on the NOT Form and instructions.

Regardless of whether you are submitting a new or revised NOI, you must complete the NOI in its entirety and the NOI must be signed.

Section II--Facility Operator Information

Part A: The facility operator is the legal entity that is responsible for all permit related compliance activities at the facility. In most cases, the facility operator is the owner of the business or operation where the industrial activity occurs. Give the legal name and the address of the person, firm, public organization, or any other entity that is responsible for complying with the General Permit.

Part B: Check the box that indicates the type of operation.

Section III--Facility Site Information

Part A: Enter the facility's official or legal name and provide the address. Facilities that do not have a street address must provide cross-streets or parcel numbers. Do not include a P.O. Box address in Part A.

Part B: Enter the mailing address of the facility if different than Part A. This address may be a P.O. Box.

The contact person should be the plant or site manager who is familiar with the facility and responsible for overseeing compliance of the General Permit requirements.

Part C: Enter the total size of the facility in either acres or square feet. Also include the percentage of the site that is impervious (areas that water cannot soak into the ground, such as concrete, asphalt, and rooftops).

Part D: Determine the Standard Industrial Classification (SIC) code which best identifies the industrial activity that is taking place at the facility. This information can be obtained by referring to the Standard Industrial Classification Manual prepared by the Federal Office of Management and Budget which is available at public libraries. The code you determine should identify the industrial activity that requires you to submit the NOI. (For example, if the business is high school education and the activity is school bus maintenance, the code you choose would be bus maintenance, not education.) Most facilities have only one code; however, additional spaces are provided for those facilities that have more than one activity.

Part E: Identify the title of the industrial activity that requires you to submit the NOI (e.g., the title of SIC Code 2421 is Sawmills and Planing Mills, General). If you cannot identify the title, provide a description of the regulated activity(s).

Section IV--Address for Correspondence

Correspondence relative to the permit will be mailed occasionally. Check the box which indicates where you would like such correspondence delivered. If you want correspondence sent to another contact person or address different than indicated in Section II or Section III then include the information on an extra sheet of paper.

Section V--Billing Address Information

To continue coverage under the General Permit, the annual fee must be paid. Use this section to indicate where the annual fee invoices should be mailed. Enter the billing address if different than the address given in Sections II or III.

Section VI--Receiving Water Information

Provide the name of the receiving water where storm water discharge flows from your facility. A description of each option is included below.

1. Directly to waters of the United States: Storm water discharges directly from the facility to a river, creek, lake, ocean, etc. Enter the name of the receiving water (e.g., Boulder Creek).

2. Indirectly to waters of the United States: Storm water discharges over adjacent properties or right-of-ways prior to discharging to waters of the United States. Enter the name of the closest receiving water (e.g., Clear Creek).

Section VII--Implementation of Permit Requirements

Parts A and B: Check the boxes that best describe the status of the Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring Program.

Part C: Check yes or no to questions 1 through 4. If you answer no to any question, you need to assign a person to these tasks immediately.

As a permit holder you are required to have an SWPPP and Monitoring Program in place prior to the beginning of facility operations. Failure to do so is in direct violation of the General Permit. Do not send a copy of your SWPPP with your NOI submittal.

Please refer to Sections A and B of the General Permit for additional information regarding the SWPPP and Monitoring Program.

Section VIII--Regulatory Status

In some instances, the facility may be covered under another permit from the State Water Board. If there is a current NPDES or WDR permit for the facility, list the permit number in the space provided (e.g., NPDES Permit CA0000123, WDR No. 96-960). You will not be required to pay the annual fee for the General Permit if you are already paying a fee for an NPDES or WDR permit. If the facility is not covered under a State Water Board permit, then skip to Section IX.

Section IX--Site Map

Provide a "to scale" drawing of the facility and its immediate surroundings. Include as much detail about the site as possible. At a minimum, indicate buildings, material handling and storage areas, roads, names of adjacent streets, storm water discharge points, sample collection points, and a north arrow. Whenever possible limit the map to a standard size sheet of paper (8.5" x 11" or 11" x 17"). **Do not send blueprints** unless you are sending one page and it meets the size limits as defined above.

A location map may also be included, especially in cases where the facility is difficult to find, but are not to be submitted as a substitute for the site map. The location map can be created from local street maps and U.S. Geological Survey (USGS) quadrangle maps, etc.

A revised site map must be submitted whenever there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.).

Section X--Certification

This section should be read by the facility operator. The certification provides assurances that the NOI and site map were completed by the facility operator in an accurate and complete fashion and with the knowledge that penalties exist for providing false information. It also requires the Responsible Party to certify that the provisions in the General Permit will be complied with.

The NOI must be signed by:

For a Corporation: a responsible corporate officer (or authorized individual).

For a Partnership or Sole Proprietorship: a general partner or the proprietor, respectively.

For a Municipality, State, or other non-Federal Public Agency: either a principal executive officer or ranking elected official.

For a Federal Agency: either the chief or senior executive officer of the agency.

State of California
State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH **INDUSTRIAL ACTIVITY** (WQ ORDER No. 97-03-DWQ)
(Excluding Construction Activities)

SECTION I. NOI STATUS (please check only one box)

{PRIVATE }A. [ ] New Permittee B. [ ] Change of Information WDID # |__|__|__|__|__|__|__|__|__|__|__|__|__|

SECTION II. FACILITY OPERATOR INFORMATION (See instructions)

{PRIVATE }A. NAME:

Phone:

Mailing Address:

{PRIVATE }City:

State:

Zip Code:

Contact Person:

B. OPERATOR TYPE:
(*check one*) 1.[ ] Private 2.[ ]City 3.[ ]County 4.[ ]State 5.[ ]Federal 6.[ ]Special District 7.[ ]Gov. Combo

SECTION III. FACILITY SITE INFORMATION

{PRIVATE }A. FACILITY NAME

Phone:

Facility Location:

County:

{PRIVATE }City:

State: CA

Zip Code:

{PRIVATE }B. MAILING ADDRESS:

{PRIVATE }City:

State:

Zip Code:

{PRIVATE }Contact Person:

{PRIVATE }C. FACILITY INFORMATION
Total Size of Site: Acres [ ] Sq. Ft. [ ] (check one)

Percent of Site Impervious (*including rooftops*) |__|__|__| %

{PRIVATE }D. SIC CODE(S) OF REGULATED ACTIVITY: E. REGULATED ACTIVITY (*describe each SIC code*):

1. |__|__|__|__|

2. |__|__|__|__|

3. |__|__|__|__|

FOR STATE USE ONLY:

{PRIVATE }

SECTION IV. ADDRESS FOR CORRESPONDENCE

{PRIVATE } I_I Facility Operator Mailing Address (Section II)   I_I Facility Mailing Address (Section III, B.)   I_I Both

SECTION V. BILLING ADDRESS INFORMATION

{PRIVATE }SEND BILL TO: [ ]Facility Operator Mailing Address (Section II) [ ]Facility Mailing Address (Section III, B.) [ ]Other (*enter information below*)

Name:		Phone: I_I_I_I--I_I_I_I--I_I_I_I_I
Mailing Address:		
{PRIVATE }City:	State: __I	Zip Code: I_I_I_I_I_I_I--I_I_I_I_I
{PRIVATE }Contact Person:		

SECTION VI. RECEIVING WATER INFORMATION

{PRIVATE }Your facility's storm water discharges flow: (*check one*) [ ] Directly OR [ ] Indirectly to waters of the United States.

Name of receiving water: I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I_I
(river, lake, stream, ocean, etc.)

SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS

{PRIVATE }A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (*check one*)
[ ] A SWPPP has been prepared for this facility and is available for review.
[ ] A SWPPP will be prepared and ready for review by (enter date): ____/____/____.

B. MONITORING PROGRAM (check one)
[ ] A Monitoring Program has been prepared for this facility and is available for review.
[ ] A Monitoring Program will be prepared and ready for review by (enter date): ____/____/____.

C. PERMIT COMPLIANCE RESPONSIBILITY
Has a person been assigned responsibility for:
1. Inspecting the facility throughout the year to identify any potential pollution problems? .... ____YES ____NO
2. Collecting storm water samples and having them analyzed?.................... ____YES ____NO
3. Preparing and submitting an annual report by July 1 of each year? .... ____YES ____NO
4. Eliminating discharges other than storm water (*such as equipment or vehicle wash-water*) into the storm drain? .... ____YES ____NO

SECTION VIII. REGULATORY STATUS (*Go to Section IX if not applicable*)

{PRIVATE }A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: I_I_I_I_I_I_I_I_I   B. NPDES PERMIT CA __I_I_I_I_I_I_I_I_I

SECTION IX. SITE MAP

{PRIVATE }I HAVE ENCLOSED A SITE MAP   YES[ ]   A new NOI submitted without a site map will be rejected.

SECTION X. CERTIFICATION

{PRIVATE }"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name:

Signature: ______________________________ Date

Title:

DEFINITIONS

1. "Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this General Permit.

2. Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC. 1251 et seq.

3. "Facility" is a collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

4. "Non-Storm Water Discharge" means any discharge to storm sewer systems that is not composed entirely of storm water.

5. "Significant Materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

6. "Significant Quantities" is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.

7. "Significant Spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR 110.10 and 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

8. "Storm water" means storm water runoff, snow melt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

9. "Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the facilities identified in Categories 1 through 9 of Attachment 1 of this General Permit, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

   For the facilities identified in Category 10 of Attachment 1 of this General Permit, the term only includes storm water discharges from all areas listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery <u>are exposed to storm water</u>.

   Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

ACRONYM LIST

BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Federal Superfund)
CFR	Code of Federal Regulations
CWA	Clean Water Act
General Permit	General Industrial Activities Storm Water Permit
GMP	Group Monitoring Plan
NEC	No Exposure Certification
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
RCRA	Resource, Conservation, and Recovery Act
Regional Water Board	Regional Water Quality Control Board
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SIC	Standard Industrial Classification
SMCRA	Surface Mining Control and Reclamation Act
SPCC	Spill Prevention Control and Countermeasures
State Water Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	U.S. Environmental Protection Agency
WDID	Waste Discharger Identification
WDRs	Waste Discharge Requirements

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APPENDIX C
NOTICES

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NOTICE OF INTENT

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DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132-5190

5090
Ser 06CH.KF/0447
February 11, 2003

Ms. Julie Menack
California Regional Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Dear Ms. Julie Menack:

Enclosures (1) and (2) are provided for your information regarding storm water discharge at the landfill in Installation Restoration (IR) Site 01/21 (IR-01/21) at Parcel E, Hunters Point Shipyard.

The Navy is submitting the enclosed documentation to fulfill the substantive requirements of the General Permit to discharge storm water associated with an industrial activity. Formal permit requirements are not applicable since the IR-01/21 landfill is part of the IR program, under which the Navy is conducting onsite response activities under the Comprehensive Environmental Response, Compensation, and Liability Act, Section 121(e)(1), Title 42 United States Code, §§ 9621(e)(1).

Should you have any concerns with this matter, please contact Mr. Charles "Maz" Mazowiecki, Project Manager at (619) 532-0902 or me at (619) 532-0913.

Sincerely,

for KEITH FORMAN
BRAC Environmental Coordinator
By direction of the Commander

Encl: (1) Notice of Intent
(2) Site location map

5090
Ser 06CH.KF/0447
February 11, 2003

Copy to:
Mr. Chein Kao
DTSC
700 Heinz Avenue, Bldg. F, Suite 200
Berkeley, CA. 94710

Mr. Michael Work
U. S. EPA
75 Hawthorne Street
San Francisco, CA 94105-3901

State of California
State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH **INDUSTRIAL ACTIVITY** (WQ ORDER No. 97-03-DWQ)
(Excluding Construction Activities)

SECTION I. NOI STATUS (please check only one box)

A. [X] New Permittee B. [ ] Change of Information WDID #

SECTION II. FACILITY OPERATOR INFORMATION (See instructions)

A. NAME
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST DIVISION

Phone: 619 -- 532 -- 0908

Mailing Address:
1230 COLUMBIA STREET SUITE 1100

City: SAN DIEGO
State: CA
Zip Code: 92101 -

Contact Person:
BRUCE APPEL

B. OPERATOR TYPE:
(check one) 1.[ ] Private 2.[ ]City 3.[ ]County 4.[ ]State 5.[x]Federal 6.[ ]Special District 7.[ ]Gov. Combo

SECTION III. FACILITY SITE INFORMATION

A. FACILITY NAME
HUNTERS POINT SHIPYARD

Phone: 415 -- 330 -- 0561

Facility Location:
END OF EVANS STREET

County: SAN FRANCISCO

City: SAN FRANCISCO
State: CA
Zip Code: 94118 -

B. MAILING ADDRESS:
NAVY CARETAKER SITE OFFICE, BAY AREA, 410 PALM AVE BUILDING 1, SUITE 161

City: SAN FRANCISCO
State: CA
Zip Code: 94130 - 1802

Contact Person:
MIKE MENTINK

C. FACILITY INFORMATION (check one)
Total Size of Site: 35 Acres [X] Sq. Ft. [ ]

Percent of Site Impervious *(including rooftops)* 0 %

D. SIC CODE(S) OF REGULATED ACTIVITY: E. REGULATED ACTIVITY *(describe each SIC code)*:

1. 4953 LANDFILL, SANITARY
2.
3.

FOR STATE USE ONLY:

SECTION IV. ADDRESS FOR CORRESPONDENCE

[X] Facility Operator Mailing Address (Section II) [ ] Facility Mailing Address (Section III, B.) [ ] Both

SECTION V. BILLING ADDRESS INFORMATION

SEND BILL TO: [ ]Facility Operator Mailing Address (Section II) [ ]Facility Mailing Address (Section III, B.) [ ]Other (*enter information below*)

Name:

Phone: ( ) - -

Mailing Address:

City:

State:

Zip Code: -

Contact Person:

SECTION VI. RECEIVING WATER INFORMATION

Your facility's storm water discharges flow (*check one*) [X] Directly OR [ ] Indirectly to waters of the United States.

Name of receiving water: SAN FRANCISCO BAY
(river, lake, stream, ocean, etc.)

SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (*check one*)
[ ] A SWPPP has been prepared for this facility and is available for review.
[X] A SWPPP will be prepared and ready for review by (enter date): 1/7/03.

B. MONITORING PROGRAM (check one)
[ ] A Monitoring Program has been prepared for this facility and is available for review.
[X] A Monitoring Program will be prepared and ready for review by (enter date): 1/7/03.

C. *PERMIT COMPLIANCE* RESPONSIBILITY
Has a person been assigned responsibility for:

1. Inspecting the facility throughout the year to identify any potential pollution problems? ..... X YES ___NO
2. Collecting storm water samples and having them analyzed? ..... X YES ___NO
3. Preparing and submitting an annual report by July 1 of each year? ..... X YES ___NO
4. Eliminating discharges other than storm water (*such as equipment or vehicle wash-water*) into the storm drain? ..... X YES ___NO

SECTION VIII. REGULATORY STATUS (*Go to Section IX if not applicable*)

A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: B. NPDES PERMIT CA

SECTION IX. SITE MAP

I HAVE ENCLOSED A SITE MAP YES[X] A new NOI submitted without a site map will be rejected.

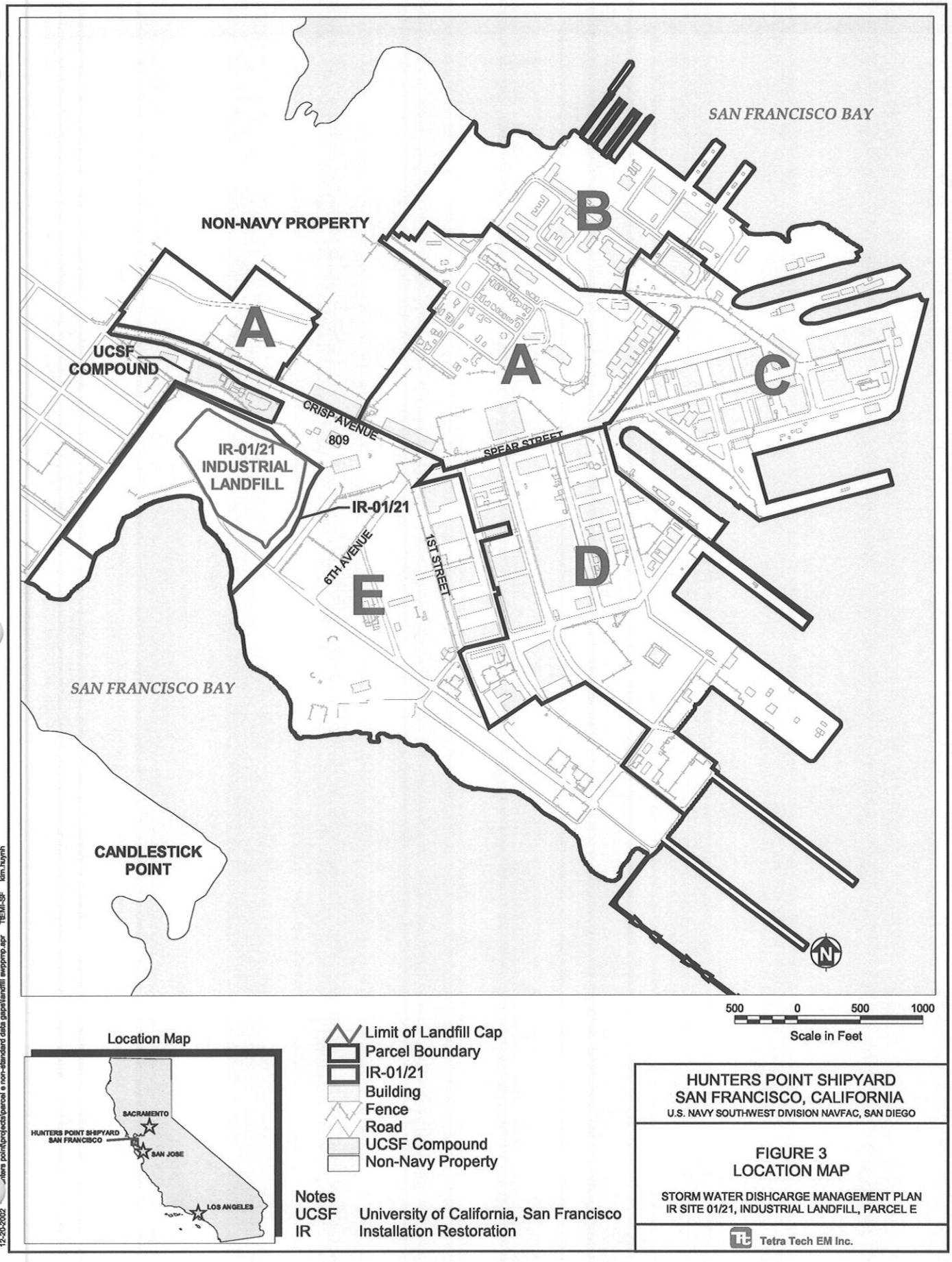
SECTION X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with "

Printed Name: BRUCE APPELL

Signature: Bruce Appell Date 11 February 2003

Title: U.S. NAVY CARETAKER SITE/BUSINESS MANAGER, SAN DIEGO/BAY AREA


SAN FRANCISCO BAY
NON-NAVY PROPERTY
B
A
A
C
UCSF
COMPOUND
CRISP AVENUE
809
SPEAR STREET
IR-01/21
INDUSTRIAL
LANDFILL
IR-01/21
6TH AVENUE
1ST STREET
E
D
SAN FRANCISCO BAY
CANDLESTICK
POINT
N
500 0 500 1000
Scale in Feet
Location Map
SACRAMENTO
HUNTERS POINT SHIPYARD
SAN FRANCISCO
SAN JOSE
LOS ANGELES
Limit of Landfill Cap
Parcel Boundary
IR-01/21
Building
Fence
Road
UCSF Compound
Non-Navy Property
Notes
UCSF University of California, San Francisco
IR Installation Restoration
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA
U.S. NAVY SOUTHWEST DIVISION NAVFAC, SAN DIEGO
FIGURE 3
LOCATION MAP
STORM WATER DISHCARGE MANAGEMENT PLAN
IR SITE 01/21, INDUSTRIAL LANDFILL, PARCEL E
Tetra Tech EM Inc.
12-20-2002
...nters point\projects\parcel e non-standard data gaps\landfill swppmp.apr TIEMI-SF kim.huynh

DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
1230 COLUMBIA STREET, SUITE 1100
SAN DIEGO, CA 92101-8571

5090
Ser BPMOW.ksf/0327
February 1, 2005

State Water Resources Control Board
Division of Water Quality
Attention: Storm Water Section
P.O. Box 1977
Sacramento, CA 95812-1977

Dear State Water Resources Control Board:

Enclosures (1) and (2) are provided for your information regarding storm water discharge at the inactive landfill in Parcel E-2 of Hunters Point Shipyard. The enclosed Notice of Intent (NOI) is not a formal submittal to the State Water Resources Control Board (State Board), and should not be processed by the State Board.

This submittal is in response to a comment from the San Francisco Regional Water Quality Control Board (Water Board) on the Draft Revision I Storm Water Discharge Management Plan (SWDMP) for the landfill at Parcel E-2, which was submitted to the Water Board on September 30, 2004. The report included a copy of a NOI for the landfill that had been previously submitted to the Water Board for informational purposes only. In their comment, the Water Board requested that the Navy change the description of the regulated activity shown on the NOI. Therefore, the Navy has changed the description from "sanitary landfill" to "landfill." The original NOI for the landfill was not submitted to the State Board. However, the revised NOI is herein submitted to the State Board, per Water Board request, for informational purposes only.

The Standard Industrial Classification (SIC) code 4953 listed on the NOI remains the same as on the NOI previously included in the SWDMP for the landfill. The change in description of the activity will not result in any changes to the SWDMP for the landfill, including sampling frequency or analytical suite.

The enclosed NOI signifies the Navy's intent to fulfill the substantive requirements of the General Permit to discharge storm water associated with an industrial activity. However, a formal permit is not applicable since the landfill at Parcel E-2 is part of the Installation Restoration Program, under which the Navy is conducting onsite response activities under the Comprehensive Environmental Response, Compensation, and Liability Act, Section 121(e)(1), Title 42 United States Code, §§ 9621(e)(1).

5090
Ser BPMOW.ksf/0327
February 1, 2005

Should you have any concerns with this matter, pleases contact Mr. Glenn Christensen, Project Manager at (619) 532-0924 or me at (619) 532-0913.

Sincerely,

Keith Forman
BRAC Environmental Coordinator
By direction of the Director

Enclosure (1) Notice of Intent
(2) Site location map

State of California

State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH **INDUSTRIAL ACTIVITY** (WQ ORDER No. 97-03-DWQ)
(Excluding Construction Activities)

SECTION I. NOI STATUS (please check only one box)

A. [X] New Permittee B. [ ] Change of Information WDID # ____________

SECTION II. FACILITY OPERATOR INFORMATION (See instructions)

A. NAME: NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST DIVISION

Phone: 619-532-0908

Mailing Address: 1230 COLUMBIA STREET SUITE 1100

City: SAN DIEGO | State: CA | Zip Code: 92101-

Contact Person: BRUCE APPEL

B. OPERATOR TYPE: (*check one*) 1.[ ] Private 2.[ ]City 3.[ ]County 4.[ ]State 5.[x]Federal 6.[ ]Special District 7.[ ]Gov. Combo

SECTION III. FACILITY SITE INFORMATION

A. FACILITY NAME: HUNTERS POINT SHIPYARD

Phone: 415-330-0561

Facility Location: END OF EVANS STREET

County: SAN FRANCISCO

City: SAN FRANCISCO | State: CA | Zip Code: 94118-

B. MAILING ADDRESS: NAVY CARETAKER SITE OFFICE, BAY AREA, 410 PALM AVE BUILDING 1 SUITE 161

City: SAN FRANCISCO | State: CA | Zip Code: 94130-1802

Contact Person: MIKE MENTINK

C. FACILITY INFORMATION (check one)
Total Size of Site: 35 Acres [x] Sq. Ft. [ ]

Percent of Site Impervious (*including rooftops*) 10 %

D. SIC CODE(S) OF REGULATED ACTIVITY:

1. 4953
2.
3.

E. REGULATED ACTIVITY (*describe each SIC code*):

1. LANDFILL
2.
3.

FOR STATE USE ONLY:

SECTION IV. ADDRESS FOR CORRESPONDENCE

[x] Facility Operator Mailing Address (Section II)	[ ] Facility Mailing Address (Section III, B.)	[ ] Both

SECTION V. BILLING ADDRESS INFORMATION

SEND BILL TO: [ ]Facility Operator Mailing Address (Section II) [ ]Facility Mailing Address (Section III, B.) [ ]Other (*enter information below*)

Name:		Phone:
Mailing Address:		
City:	State:	Zip Code:
Contact Person:		

SECTION VI. RECEIVING WATER INFORMATION

Your facility's storm water discharges flow: (*check one*) [x] Directly OR [ ] Indirectly to waters of the United States.

Name of receiving water: SAN DIEGO BAY
(river, lake, stream, ocean, etc.)

SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (*check one*)
[ ] A SWPPP has been prepared for this facility and is available for review.
[x] A SWPPP will be prepared and ready for review by (enter date): 1/7/03.

B. MONITORING PROGRAM (check one)
[ ] A Monitoring Program has been prepared for this facility and is available for review.
[x] A Monitoring Program will be prepared and ready for review by (enter date): 1/7/03.

C. PERMIT COMPLIANCE RESPONSIBILITY
Has a person been assigned responsibility for:

1. Inspecting the facility throughout the year to identify any potential pollution problems?	x YES	NO
2. Collecting storm water samples and having them analyzed?	x YES	NO
3. Preparing and submitting an annual report by July 1 of each year?	x YES	NO
4. Eliminating discharges other than storm water (*such as equipment or vehicle wash-water*) into the storm drain?	x YES	NO

SECTION VIII. REGULATORY STATUS (*Go to Section IX if not applicable*)

A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: B. NPDES PERMIT CA

SECTION IX. SITE MAP

I HAVE ENCLOSED A SITE MAP YES[x] A new NOI submitted without a site map will be rejected.

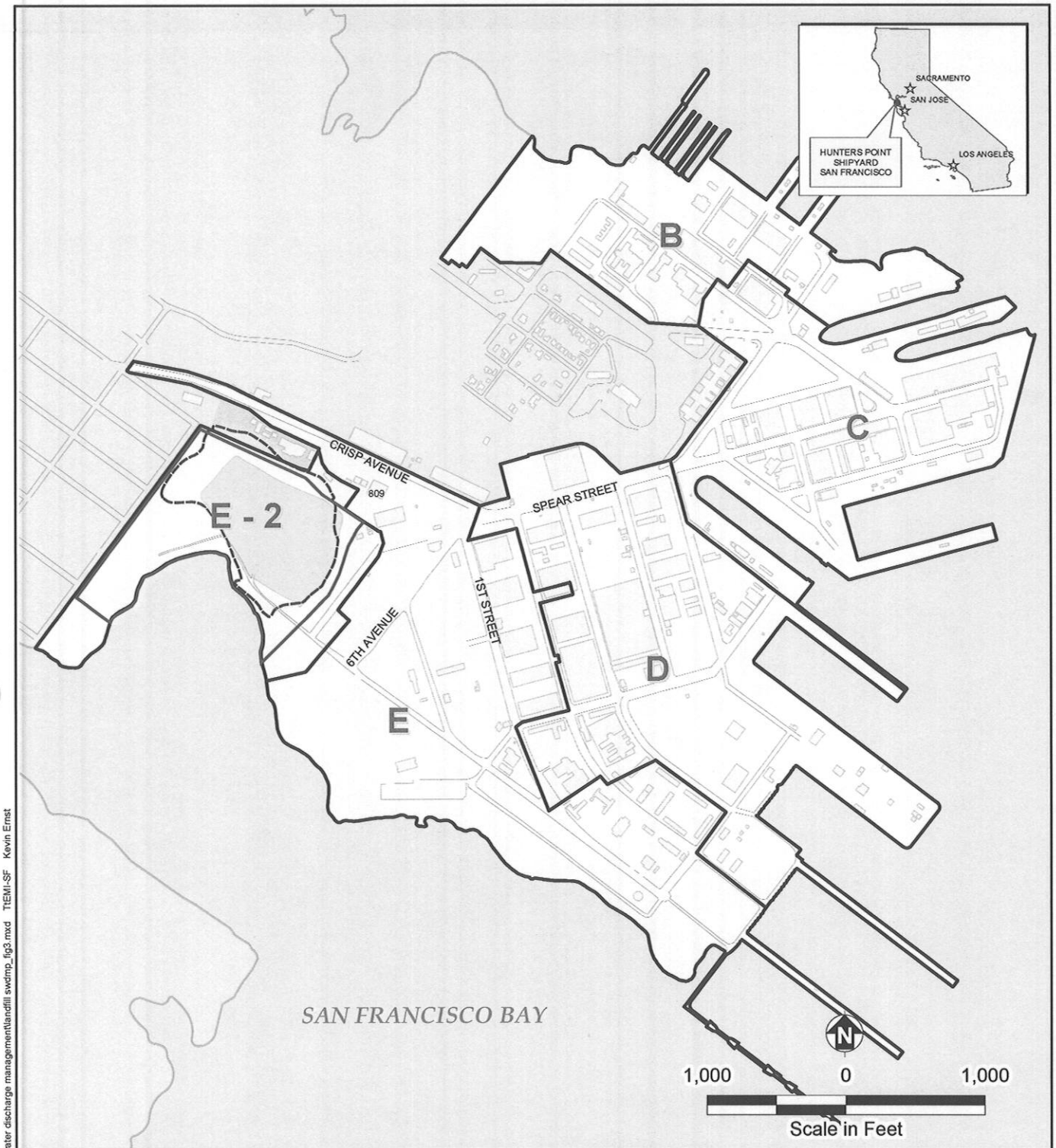
SECTION X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: BRUCE APPELL

Signature: Bruce P. Appell 1/31/03 Date

Title: U.S. Navy Caretaker Site/Business Manager, San Diego Bay Area



- Parcel Boundary
- Installation Restoration Site 01/21 (IR-01/21)
- Building
- Extent of Landfill Waste
- Limit of Landfill Cap
- Non-Navy Property
- University of California, San Francisco (UCSF) Compound
- Road

Tetra Tech EM Inc.

Hunters Point Shipyard, San Francisco, California
U.S. Department of the Navy, BRAC PMO West, San Diego, California

FIGURE 3
LOCATION MAP

Final Revised
Storm Water Discharge Management Plan
Industrial Landfill, Parcel E-2

2005-01-18 V:\Hunters Point\Projects\Landfill\storm water discharge management\landfill swdmp_fig3.mxd TtEMI-SF Kevin Ernst

NOTICE OF TERMINATION

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State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5538
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • Internet Address: http://www.swrcb.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

To: Storm Water Permit Holder

RE: NOTICE OF TERMINATION OF COVERAGE UNDER THE GENERAL **INDUSTRIAL** STORM WATER PERMIT (GENERAL PERMIT)

To terminate your coverage under the General Permit, please complete and submit the attached Notice of Termination (NOT) to your local Regional Water Quality Control Board (RWQCB). The addresses of each RWQCB, as well as staff contacts can be located on page 9 of the attached Annual Report.

You are still responsible for completing an Annual Report for the period after July 1 that your facility was required to be permitted. The completed Annual Report should be submitted along with your NOT.

Please note your annual fees will continue if the RWQCB denies your NOT. Submittal of a NOT does not guarantee termination. If your NOT is denied, you will be required to continue monitoring and reporting activities required bye the General Permit. You will be notified of your NOT status by the RWQCB or State Water Resources Control Board.

Should you have any questions regarding this matter, please contact your local RWQCB or the Storm Water Unit at (916) 341-5538.

Sincerely,

Storm Water Unit
Division of Water Quality

Enclosure

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State of California{PRIVATE }
State Water Resources Control Board

NOTICE OF TERMINATION

Submission of this Notice of Termination constitutes notification that the facility operator identified below is no longer required to comply with the **Industrial Activities** Storm Water General Permit No. 97-03-DWQ.

I. WDID NO.

II. FACILITY OPERATOR

NAME _____ CONTACT PERSON

ADDRESS _____ TITLE

CITY _____ STATE _____ ZIP _____ PHONE

III. FACILITY SITE INFORMATION

FACILITY NAME _____ CONTACT PERSON

LOCATION _____ TITLE

CITY _____ STATE CA ZIP _____ PHONE

SIC CODE(S) ___/___/___/___, ___/___/___/___ TYPE OF BUSINESS

IV. BASIS OF TERMINATION

_____ 1. **Closed Facility.** The facility is closed and all closure, moving, and clean-up activities are complete.

Date of closure ___/___/___ Are you moving to a new location in CA? _____ Yes _____ No

If Yes, start date at new location? ___/___/___ Will you file new NOI? _____Yes _____No

NEW FACILITY INFORMATION

NAME _____ CONTACT PERSON

MAILING ADDRESS _____ TITLE

CITY _____ STATE _____ ZIP _____ PHONE

_____ 2. **Light Industry Exemption.** Exposure of industrial activities, materials, and equipment to storm water has been eliminated (Applies only to certain facilities - see instructions). Complete and submit Attachment A.

Date of evaluation: ___/___/___ Date exposure eliminated (if applicable): ___/___/___

Planned date of next evaluation:___/___/

_____ 3. **No Storm Water Discharge.** Storm water associated with industrial activity does not discharge to waters of the United States because:

____ a. the storm water is retained on site (such as in evaporation or percolation ponds).
____ b. the storm water is discharged to a municipal sanitary sewer systems or municipal combined sewer system.
____ c. the storm water is retained offsite (such as in evaporation or percolation ponds).

_____ 4. **Not Required to be Permitted.** The facility is not required by federal regulations to be regulated by an industrial activities storm water NPDES permit.

_____ 5. **Regulated by Another Permit.** Discharge of storm water associated with industrial activity is specifically regulated by another general or individual NPDES permit.

NPDES Permit No._____ Date coverage began ____/____/____

_____ 6. **New Facility Operator.** There is a new facility operator of the identified facility.

Date facility was transferred to new facility operator ___/___/___.

Have you notified the new facility operator of the storm water NPDES Permit requirements? Yes____ No

NEW FACILITY OPERATOR INFORMATION

NAME CONTACT PERSON

MAILING ADDRESS TITLE

CITY STATE ZIP PHONE

V. ADDITIONAL TERMINATION INFORMATION

Are you attaching any additional termination information? Yes____ No

VI. FACILITY PHOTOGRAPHS

Have you attached facility photographs? Yes____ No____ (See Instructions)

VII. ANNUAL REPORT

Have you attached an Annual Report? Yes____ No____ (See Instructions)

VIII. CERTIFICATION

I certify under penalty of law that 1) I am not required to be permitted under the Industrial Activities Storm Water General Permit No. 97-03-DWQ, and 2) this document and all attachments were prepared under my direction and supervisions in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I am aware that it is unlawful under the Clean Water Act to discharge storm water associated with industrial activity to waters of the United States if the discharge is not authorized by a NPDES permit, and there are significant penalties for submitting false information. I understand that the facility operator is still required to submit an annual report to the Regional Water Board by July 1. I also understand that the submittal of this Notice of Termination does not release a facility operator from liability for any violations of the General Permit or the Clean Water Act.

PRINTED NAME TITLE

SIGNATURE DATE ___/___/___

REGIONAL WATER BOARD USE ONLY

☐ **Approved** and sent to State Board for termination ☐ **Denied** and returned to applicant

_____ ___/___/___

Printed Name Signature Date

State of California
State Water Resources Control Board

INSTRUCTIONS FOR COMPLETING NOTICE OF TERMINATION OF COVERAGE UNDER INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT NO. 97-03-DWQ

SECTION 1 -- WDID NO.
The WDID NO. is a number assigned to each facility after the Notice of Intent is filed. The WDID number can be found on the annual invoice where it is referenced as the "Facility I.D. Number." If you do not know your facility's WDID No., please call the State Water Board or Regional Water Board (page 9 of the attached Annual Report) and request it prior to submitting the Notice of Termination.

SECTION II -- FACILITY OPERATOR
Enter the name, provided on the Notice of Intent, of the person, company, firm, public organization, or any other entity which owns the business or operations at the facility. The facility operator information may or may not be the same as the facility information requested in Section III.

SECTION III -- FACILITY SITE INFORMATION
Enter the facility's official or legal name, provided on the Notice of Intent, and provide the address, county, and contact person information for the facility. Where the location of the facility is different than the mailing address, a narrative description of the facility location must be provided. The contact person should be the plant or site manager who is completely familiar with the facility and responsible for General Permit compliance. Provide the Standard Industrial Classification (SIC) code(s) that are applicable to the facility and describe the type of business that is conducted at the facility. For closed facilities, however, provide the SIC code(s) and describe the type of business that had been conducted at the facility.

SECTION IV -- BASIS OF TERMINATION
Check the category which best defines the basis of your termination request. Provide dates and other information requested. If the categories provided do not fully or accurately identify the basis of your termination, attach an additional explanation and check the "Yes" box in Section V.

1. Closed Facility. This category applies when the facility is closed and all closure, moving, and clean-up activities are complete. This means that all industrial activities that are subject to federal storm water regulations have been discontinued and that the exposure of industrial equipment, materials, and waste to storm water has been eliminated. The facility operator should refer to the definition of "storm water associated with industrial activity" in Attachment 4 of the General Permit. Facilities that discontinue operations shall not be considered for termination if industrial equipment, materials, or waste remain exposed to storm water. The date when closure is complete shall be provided. If you are moving to a new facility requiring General Permit coverage, provide the name, address, and contact of the new facility.

2. Light Industry Exemption. This category applies only to certain facilities identified as category 10 on Attachment 1 of the General Permit (commonly referred to as "light industries") where exposure of industrial activities, materials, and equipment to storm water has been eliminated. Accidental spills, minor leaks, loss during loading and unloading, movement of unhoused equipment, emissions of dust or particles from stacks or air exhaust systems, and other type of intermittent sources should be considered when determining exposure. Complete and submit Attachment A entitled "Checklist to Evaluate Potential Storm Water Pollutant Sources". Provide the date the facility was evaluated and the date the next evaluation is planned. If you have taken steps to eliminate exposure of industrial activities, materials, and equipment to storm water, provide the date that exposure was eliminated.

3. No Storm Water Discharge. This category applies to facilities where storm water associated with industrial activity does not discharge to waters of the United States. These include facilities where all the storm water is retained on site, discharged to a municipal sanitary sewer system or municipal combined sewer system, or discharged to evaporation or percolation ponds offsite that do not discharge to waters of the United States.

4. Not Required to be Permitted. This category applies to facilities that are not required by federal regulations to be covered by a NPDES storm water permit. Attachment 1 of the General Permit identifies ten categories of industrial facilities required to obtain NPDES permits for discharge of storm water associated with industrial activity. A facility operator who has filed a Notice of Intent for coverage under the General Permit and later

determines that the facility is not included in the identified categories may request termination of coverage. Make sure that the SIC code(s) and type of business in Section III of the NOT form are accurate.

5. Regulated by Another Permit. This category applies to facilities where discharges of storm water associated with industrial activity are currently regulated under another general or individual NPDES permit. The general or individual NPDES permit number and date coverage began shall be provided.

6. New Facility Operator. This category applies when there is a new facility operator of the identified facility. The previous facility operator must submit a Notice of Termination and the new facility operator must submit a Notice of Intent and fee for coverage under the General Permit. Provide the date the new facility operator took responsibility for the facility and the new facility operator information. Note that the previous facility operator may be liable for discharges from the facility until the new facility operator files a Notice of Intent for coverage under the General Permit.

SECTION V -- ADDITIONAL BASIS OF TERMINATION INFORMATION
If none of the basis of termination in Section IV accurately reflect your basis for termination, answer "Yes" and attach a detailed explanation why you believe your facility is not required to be permitted.

SECTION VI -- FACILITY PHOTOGRAPHS
If category 1, 2, or 3 is checked in Section IV, attach photographs of all areas of the facility associated with industrial activity including any on-site or off-site storm water containment areas. If category 4, 5, or 6 is checked in Section IV, contact your Regional Water Board (page 9 of the attached Annual Report) to determine whether photographs must be submitted.

SECTION VII -- ANNUAL REPORT
You are responsible for submitting an Annual Report (Attachment B) for all compliance activities conducted between July 1 and the date the facility was no longer required to be permitted. In order to assist the Regional Board in processing your NOT, a completed Annual Report should be attached to your NOT. If you cannot submit an Annual Report, please contact your Regional Board office prior to submitting your NOT.

SECTION VIII -- CERTIFICATION
This section should be read by the facility operator. Please note that the facility operator is still required to prepare and submit a final annual report to the appropriate Regional Water Board office by July 1. The annual report must report all compliance activities that occurred during the current reporting period and prior to the date this Notice of Termination was submitted. The Notice of Termination must by signed by:

For a corporation: a responsible corporate officer. For a Partnership or Sole Proprietorship: a general partner or the proprietor, respectively. For a Municipality, State, or other Non-Federal Public Agency: either a principle executive officer or ranking elected official. For a Federal Agency: either the chief or senior executive officer of the agency.

Where To File

The Notice of Termination should be submitted to the Regional Water Board responsible for the area in which the facility is located. See attached State and Regional Boards Directory. If the Regional Water Board agrees with the basis of termination, the Notice of Termination will be transmitted to the State Water Board for processing. If the Regional Water Board does not agree with the basis of termination, the Notice of Termination will be returned. The Regional Water Board may contact you or inspect your facility prior to (or following) approving this Notice of Termination.

CHECKLIST TO EVALUATE POTENTIAL STORM WATER POLLUTANT SOURCES (COMPLETE ONLY WHEN CHECKING ITEM IV.2 ON NOT FORM)

The purpose of this checklist is to 1) help you determine whether the exposure of industrial activities, materials, and equipment to storm water has been eliminated, and 2) help Regional Water Board staff to evaluate the adequacy of your pollution control activities and Notice of Termination (NOT). Please answer all questions. Answering "YES" to a question does not negate your NOT. For each "yes" answer you must explain what you are doing to eliminate or prevent exposure from the potential pollutant source. For example, if there are liquid storage tanks outdoors behind secondary containment but the storm water is collected and discharged to the sanitary sewer, then the potential source for storm water exposure from the storage tanks may be satisfactorily eliminated. For the purpose of this questionnaire, "outdoors" are areas of the facility that are not beneath permanent roofed structures.

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted.

	Yes	No
a. Are materials or equipment cleaned outdoors?	____	____
b. Are wash or rinse waters generated on-site?	____	____
c. Are there any discharges (other than storm water) entering the storm drain system?	____	____
d. Do any drains under roofed areas discharge to the storm drain system?	____	____
e. Have there been any accidental spills into the storm drain system in the last year?	____	____
f. Are any process waste waters disposed of outdoors?	____	

2. All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

	Yes	No
a. Are there any materials stored outdoors?	____	____
b. Are there any materials handled outdoors?	____	____
c. Are there any outdoor loading docks?	____	____
d. Are there any above ground liquid or non-liquid storage tanks outdoors?	____	____
e. Are there any outdoor loading/unloading operations?	____	____
f. Are there any products or by-products manufactured or used outdoors?	____	____
g. Are there any waste products manufactured or used outdoors?	____	____
h. Are there any outdoor waste disposal areas?	____	____
i. Is any process wastewater disposed of outdoors?		
j. Are there any drums, pallets, or containers outdoors?	____	____

k. Are materials handled/stored on immediate access roads/railways? ____ ____

l. Are vehicles maintained or fueled outdoors? ____ ____

m. Are any materials stored or disposed of in outdoor ponds or impoundments? ____ ____

n. Are materials stored outdoors temporarily? ____

o. Does any manufacturing take place outdoors? ____

p. Have there been any spills or leaks outdoors in the last year? ____ ____

q. Are there areas where materials remain exposed to storm water from past industrial activity? ____ ____

3. **All industrial activities and industrial equipment are not exposed to storm water or authorizednon-storm water discharges.**

	Yes	No
a. Are any material handling vehicles (such as forklifts) parked outdoors?	____	____
b. Is permanent industrial equipment located outdoors?	____	____
c. Is portable industrial equipment used outdoors?	____	____
d. Do any material handling vehicles (such as forklifts and trucks) or outdoor industrial equipment come into contact with materials?	____	____
e. Is there any unhoused rooftop equipment (such as air conditioners, scrubbers, etc.)?	____	____

4. **There is no exposure of storm water to significant materials associated with industrial activities through direct or indirect pathways such as from industrial activities that generate dust and particulates.**

	Yes	No
a. Are there any emissions of dust or particles from stacks or air exhaust systems?	____	____
b. Are there any emissions of dust or particles from other outlets such as windows, loading docks, etc.?	____	____
c. Have there been any spills or leaks associated with maintenance of stacks or air exhaust systems?	____	____

STATE AND REGIONAL BOARD CONTACT LIST

Contact List is located at
www.swrcb.ca.gov/stormwtr/contact.html
under *Contacts*

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APPENDIX D
ILLICIT CONNECTION/NON-STORM WATER DISCHARGE IDENTIFICATION AND TESTING PROTOCOL

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APPENDIX D
ILLICIT CONNECTION/NON-STORM WATER
DISCHARGE IDENTIFICATION AND TESTING PROTOCOL

D.1 INTRODUCTION

To comply with the General Permit, the Activity must eliminate all prohibited non-storm water discharges. The Non-Storm Water Discharge Elimination and Prevention Program (NSDEPP) has been in effect for several years and its provisions to identify and correct illicit connections and other non-storm water discharge have been substantially accomplished. The NSDEPP provides for on-going activities, however, in accordance with the General Permit. The plan provides for inspections and testing on an on-going basis to eliminate possible new unauthorized non-storm water discharges and to prevent their reoccurrence. The following sections present procedures for performing inspections to assess the presence and identify sources of prohibited non-storm water discharges at the Activity in the event that new non-storm water flow is detected during the on-going inspections.

The procedures described below are intended to assist in determining the presence and sources of non-storm water flow (Section 3.0) and to supplement the non-storm water discharge visual observations described in the monitoring plan (Section 5.0). The following four sections: Visual Inspection and Testing; Physical Investigation of the Storm Drain System; Health and Safety Guidelines; and Quality Assurance/Quality Control Plan, provide step-by-step instructions where appropriate. Forms referenced are provided in Annex A of this appendix.

D.2 VISUAL INSPECTION AND TESTING

If flow is observed at an outfall and the discharge is potentially unauthorized, further investigation is warranted. The primary method of identifying potential illicit connections is through visual inspection of the storm drain piping, outfalls, and structures. Visual inspection of all structures associated with the outfall is performed before prescribing whether physical testing must be done on the storm drain system. Before undertaking a visual inspection of the system, the results of previous inspections of the system should be reviewed so that any previously identified flows and sources can be quickly identified and discounted.

Identification of prohibited non-storm water discharges and illicit connections to the storm drain

system requires experienced team(s) of a minimum of two individuals to conduct the field investigation; including inspection of manholes, catch basins, and pipelines in the storm water system.

Detection of non-storm water discharges is accomplished by investigation of storm water outfalls during dry weather conditions. The following section presents a guide to the procedures and techniques required for field work and includes procedures for each step in the field investigation program, health and safety guidelines, and a quality assurance/quality control plan. The basic steps involved in the field work are summarized as follows:

- Identify the outfall to be investigated and the associated structures, if possible;
- Prepare for field work, including compiling maps, field forms, and equipment and verifying that 72 hours of dry weather have preceded any field work; and
- Perform field investigation including documenting field observations, identifying sources of non-storm water flow, and collecting a water sample, if appropriate.

The non-storm water discharge investigation procedures are described below.

TASK 1. IDENTIFY THE OUTFALLS

All outfalls have been visually inspected previously as part of the Non-Storm Water Discharge Testing Plan. As new storm sewer and/or drainage structure construction projects are completed they should be included in the non-storm water visual observation program. Additionally, non-storm water discharges may be found in areas or at outfalls which had previously been found to be free of discharges and illicit connections. These outfalls should be investigated using the procedures in this section.

TASK 2. PREPARE FOR FIELD WORK

To perform field work efficiently, planning and preparation of materials should be completed before leaving the office. A list of necessary equipment is provided in Table D-1.
Prepare maps and field forms.

A. Make sure that the outfall(s) to be investigated are shown on the Activity map before planning the field screening trip.

B. Complete a Field Data Sheet for the outfall; a sample Field Data Sheet, Form D-2, is provided in Annex A.

C. Have several copies of the Structure Inspection Form (Form D-1) reproduced in preparation for field work at the Activity.

Determine recent rainfall conditions.

A. Precede any field work and site visits with at least 72 hours of dry weather.

B. If needed, call the San Francisco County Flood Control Division between 0700 and 1600 weekdays at (619) 495-5557 or call the National Weather Service for 24-hour recorded weather forecasts at (831) 656-1725.

TASK 3. PERFORM FIELD WORK

The field work consists of the site inspection and investigation of the structures associated with the outfall. The Field Data Sheet (Form D-2) has provisions for recording general outfall information, observations, and characterization of any observed non-storm water flow. Space is also provided to record source identification information and sample collection, if applicable.

TASK 4. RECORD GENERAL INFORMATION AND OBSERVATIONS

Observations at the outfall are critical to the success of the field work and may be the best source of information for many site visits. Upon arrival at the outfall, complete the Field Data Sheet:

A. Record information including:

- Date and time of site visit,
- team leaders initials, and
- recent rainfall information.

B. Record flow information.

A photograph of the outfall is also recommended. Record the photo number and film roll number on the Field Data Sheet for each picture taken. Photographs of the outfall provide a convenient and

valuable record of the condition of pipes, structures and the surrounding environment, and help new field crews locate the outfalls for subsequent site visits.

Record observations as follows:

A. Take photograph(s) of the outfall and record photo number on the Field Data Sheet.

B. Observe and record the presence of floatables such as an oily sheen, trash, or sewage.

C. Look for evidence of dry weather flows, such as staining, corrosion, or sediments, even if no water is flowing from the outfall.

D. Observe and record the condition of surrounding vegetation. Excessive or inhibited growth may indicate the presence of nutrients or toxic substances in runoff or illegal discharges.

E. Observe and record any evidence of dumping in the vicinity of the outfalls.

F. Record the presence of algae, bacteria, mosquito larvae, insects, rodents, and other animals in the vicinity of the outfall.

G. Make any other relevant observations on the back of the Field Data Sheet.

TASK 5. IDENTIFICATION OF SOURCE OF ANY OBSERVED NON-STORM WATER DISCHARGE

It is important to locate the source of any observed non-storm water discharge. As discussed in Sections 3.0 and 5.0 of the SWDMP, some sources of non-storm water discharge are authorized under the conditions of the General Permit. Therefore, it is crucial to track the non-storm water discharge as carefully and accurately as possible to its source.

Step 1. Track The Flow Upstream

Once the site inspection has been completed and a non-storm water discharge observed, the flow should be tracked upstream to identify the source, if possible. Some water quality indicators and their possible sources are shown in Table D-2. Use the following approach:

A. Work upstream in the storm drain system, using the Activity storm drain map. Proceed to the next upstream manhole at a junction in the storm drain system and check for the presence of flow. Field teams should document observations of

structures on the Structure Inspection Forms (Form D-1) and storm drain maps. Structure Inspection Forms include the location and description of each structure including potential illicit connections, BMP issues, and any environmental or physical hazards. Proximity of a structure to nearby buildings and landmarks is also recorded on the Structure Inspection Form.

B. While proceeding upstream, make visual observations of the surrounding area, especially looking for water flowing in streets and gutters, and around areas of suspected illegal dumping.

C. If flow from more than one pipe is observed at a junction, track one flow at a time. Decide which flow to track first, considering the appearance, odor and volume of the flow, giving priority to the flow appearing more contaminated. If two flows are observed and appear similar, proceed with the easier upstream route first.

D. Record all observations on the Field Data Sheet.

E. In instances where the visual inspection of a structure reveals a potential illicit connection, further information is gathered and noted on the Structure Inspection Form. Evidence of potential illicit connections includes pipes connected into a structure, but not recorded on the storm drain maps, and the presence of oil and/or sediment, that may have entered the storm drain between inspected structures. Field sketches are drawn detailing the potential illicit connection at the structure, and photographs are taken of potential illicit connections.

Step 2. Identify The Source Of The Non-Storm Water Discharge

Provide source identification information when a water source has been tracked to its origin. Information to be provided includes:

- The name, address, and telephone number of a contact person (if appropriate);
- The nature of the discharge; and
- The date and time the discharge was observed.

Determine whether the flow is authorized when the source of flow is discovered. Sources of non-storm water discharge authorized under the General Permit are shown in Table D-3. If the flow is not authorized, perform the following steps:

A. Take a photograph(s) of the source.

B. Fill out the Source Identification Sheet completely.

C. Provide photograph(s), Field Data Sheet(s) and the source identification sheet to your supervisor for follow-up action. If a sample of the discharge is warranted as determined by your supervisor, follow the procedures described in Section 5.0.

D.3 PHYSICAL INVESTIGATION OF THE STORM DRAIN SYSTEM

If visual efforts do not result in discovering the source of the discharge, the Activity should perform a physical investigation of the storm drain system. Physical investigation can include smoke tests, dyed water trace tests, and television inspection of the storm drain lines. One or more of these tests should enable the Activity to identify the source of any non-storm water discharge.

Test 1. Smoke Testing

Smoke testing of the storm drain system is used to identify the sources of direct inflow and infiltration (I/I) in pipes, service laterals, and around manholes and catch basins.

Smoke testing requires a three-person team, which typically completes 5,000 to 7,000 feet of storm drain per day. Prior to conducting the field work, storm drain maps are reviewed to identify potential illicit connection areas (through visual inspections) that need to be observed during smoke testing. These areas designated for smoke testing are clearly marked on the storm drain maps.

Activity personnel and the public are notified by smoke test warning notices posted on buildings 24 to 48 hours prior to the smoke testing. Local police and fire departments are also notified via facsimile transmissions of the smoke test warning notice that is posted on the buildings.

Smoke testing is best performed during dry weather when the groundwater is lower and the soil is drier. Under these conditions, many shallow infiltration sources, and direct inflow sources can be detected through smoke testing. The absence of water and moist environments enables smoke to move quicker through I/I sources. The observation of emitted smoke in industrial or sanitary drain lines is positive proof of defects in the storm drain system.

Before the smoke test blower is placed over a storm drain structure, a gas meter is inserted into the structure to determine whether there are unsafe levels of gas. Once the structure is determined to be safe, the blower is operated for 5 to 10 minutes without smoke to ventilate the system and establish

flow paths. After the system is ventilated, a smoke candle or liquid smoke source is attached to the blower. A non-toxic, harmless smoke flows through the storm drain system and through defective areas of the system.

Two members of the smoke testing team conduct a pre-arranged walk-through of the nearby buildings and outside areas to find smoke release sites. The third member of the crew controls the blower and volume of smoke generated. All smoke release sites indicating possible illicit connections are marked, photographed, and noted as possible I/I sources. The structure number, possible I/I source locations, and distance of travel of smoke are recorded on the Smoke Testing Setup Form (Form D-3). Additional information for each defect, such as defect number and type, type of surface, drainage area, and smoke intensity, is recorded on the Smoke Testing Defect Form (Form D-4). Recommendations for dye testing and video-camera inspection are also recorded on these forms.

Test 2. Dyed-Water Trace Testing

Dyed-water trace testing is used as a confirmation method for I/I sources discovered through visual inspections and smoke testing. This method of testing is an appropriate confirmatory test for point I/I sources, such as janitor sinks, floor drains, and other illicit connections.

The dye is a safe, water soluble, biodegradable, green or yellow tablet which is used in low concentrations. It is non-reactive with sediment and debris in the storm drain system and has no harmful effects on the environment. The dye tablet is dissolved in water and is poured into the particular point I/I source discovered through visual inspections and/or smoke testing. The presence of dyed water in a nearby storm drain structure, monitored by a crew member, provides a positive confirmation of an illicit connection source.

The Dyed-Water Trace Testing Form (Form D-5) is used to record information regarding the location and type of I/I source and the structure number where the dyed water is observed in the storm drain system. Dyed-Water Trace Testing Forms include data on pipe condition, the type of defect, defect location, locations of plugs, and the location of any water source.

Test 3. Dyed-Water Flooding

Dyed-water flooding is used as a confirmatory test for illicit connection sources discovered through smoke testing. Dyed-water flooding is an appropriate illicit connection source confirmation test for system or area sources, such as sanitary sewers and large illicit connections. It is primarily used when the storm drain system and sanitary system are parallel and in close proximity to each other. If an illicit connection is suspected, dyed-water flooding is applied to identify illicit connections between the sanitary system and the storm drain system. Prior to dyed-water flooding, it is necessary to conduct sediment sampling as discussed in Test 5.

The particular pipelines or areas identified as probable illicit connection sources are flooded with water provided by a fire hydrant or tank/tanker, to which fluorescent dye is added. Flow measurements (if any) or standing water levels are measured in storm drain systems before and after flooding to quantify the I/I sources. In cases where flow measurements are inappropriate, the presence of dyed water confirms the I/I source. Information regarding the location (the type of I/I source, and the structure number(s) where the dyed water is observed or measured) is recorded. The Dyed-Water Trace Testing Form (Form D-5) also can be used to record information during dyed-water flooding.

Test 4. Video-Camera Inspection

I/I sources are identified by the previously described procedures of visual inspections, smoke testing, dyed-water trace testing, and dyed-water flooding. Some points of intrusion found by these methods are discovered through video-camera inspection. Video-camera inspections also find defects and intrusions not previously discovered through the other physical tests. Video-camera inspection typically requires a mobile video unit van with a Radial View Camera (RVC 360), video monitoring and recording equipment, a video power unit, and a power cable with a winch.

In another method of inspection, the video camera is attached to a special crawling device that crawls through the storm drain pipe. This method of travel allows the camera to be operated without the use of water or the cleaning of pipes. The electronically controlled crawler is managed by the video operator. The camera and its attached crawler move through the storm drain pipe, pausing to observe and note drain pipe intrusions or defects.

Information for each defect is recorded, including structure numbers, flow direction, distance obtained from the footage counter on the video screen, quadrant section of defect, type of defect using source codes, and any additional comments on the Video-Camera Inspection Data Form (Form D-6). Video-Camera Inspection Forms include data on structural defects and cracks, offset and separating joints, protruding materials, roots, infiltrations, and alignment problems. An audio commentary is also recorded.

In addition to the forms discussed above, an Illicit Connection Report Form (Form D-7) can be used to record the illicit connection information identified by visual inspections, smoke testing, dyed-water trace testing, and video inspections. This report is a record of information pertaining to an illicit connection and includes the type of illicit connection, discharge source, discharge content, surface material, depth of surface to connection, type of surface, and correction recommendations.

Additionally, storm drain lines may be so clogged with sediment that make video inspection impossible. In these cases, the lines must be cleaned. Prior to cleaning, the sediment must be sampled as described below.

Test 5. Sediment Sampling

Sediment sampling is conducted prior to dyed-water flooding or video-camera inspection of the storm drain system to classify sediment in the storm drain line as either hazardous or non-hazardous and to identify storm drain lines that require cleaning. Video-camera inspection in pipes containing hazardous sediment is limited to pipes that are not completely plugged and do not require cleaning.

Tests performed for disposal include: corrosivity; ignitability; reactivity; and toxicity. The landfill selected for disposition often will specify the testing method(s).

The grab sample is homogenized in a stainless steel mixing bowl and then transferred into a glass container, ensuring that a minimum of 500 grams of sediment is in the container. The contents of the container are tested for final disposal to determine if the sediment is hazardous.

Two-person field sampling teams use extended-reach pole samplers to collect grab samples from a pre-determined number of structures from the storm drain pipeline. Visual observations are noted regarding sediment characteristics, such as color, texture, odor, oiliness, and moisture content. These observations, time, date, sampler names, structure number, and sample identification numbers are recorded on the Sediment Sampling Field Data Sheet (Form D-8).

If required, trip blank samples are used with VOC samples, and duplicate and rinsate samples are collected with a frequency of 10 percent and 5 percent, respectively, of total samples collected. Each duplicate sample is identical to a known sediment sample. Duplicate samples are used as a check on field sampling and laboratory analytical procedures. Rinsate samples are used as a check on equipment decontamination procedures. The rinsate sample consists of ASTM Type II water used in the final rinse of sampling equipment decontamination. Trip blanks are created at the laboratory by filling sample containers with analyte-free water. Trip blanks are used as a check on contamination during transport.

Samples are identified and labeled according to outfall and structure number, tests to be performed, date, time, and initials of the sampler. All samples are immediately stored in a cooler at 4°C ± 2°C, packed and shipped to a laboratory under chain-of-custody procedures. Chemical analysis of the samples is performed by a laboratory capable of analyzing samples by USEPA-approved methods.

D.4 HEALTH AND SAFETY GUIDELINES

The field crew should be familiar with the current HPS basewide health and safety guidelines before undertaking field work.

D.5 QUALITY ASSURANCE/QUALITY CONTROL PLAN

The measures and procedures to be followed to accomplish the objectives of a guidance QA/QC Plan are detailed in Appendix I. The purpose of a Quality Assurance/Quality Control (QA/QC) Plan is to provide ongoing control and evaluation of measurement data quality throughout the course of the non-storm water discharge testing. Implementation of a sound QA/QC Plan ensures data collected are of high quality and defensible in court.

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TABLES

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TABLE D-1
MINIMUM RECOMMENDED EQUIPMENT FOR FIELD SCREENING

yes/no	Maps, Field Sheets, Etc.	yes/no	Sampling Equipment
	Field data sheets		Pick or manhole cover puller
	Outfall list		Rope to attach to bucket
	Outfall location map		5-gallon plastic bucket
	Source identification sheets		Sample bottles
	Activity storm drain maps		25 foot long metal tape
			Engineer's scale
yes/no	**Field Equipment**		Field chemical test kit
	Clipboard and ball-point pens		pH 7.0 buffer
	Camera with flash attachment		Small jeweler's screwdriver
	Extra film		Distilled water
	Flashlight		Extra pH probe
	Hard hats		Squeeze wash bottles
	Road cones/barricades/vests		Wipes for glassware
	First aid kit		Chain of custody forms
	Boots/gloves/goggles		Ice chest
	Health and safety plan		Waste containers

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TABLE D-2
INDICATORS OF POSSIBLE SOURCES OF POLLUTANTS

Indicators	Possible Sources
Ammonia	Broken sanitary wastewater lines, lawn/agricultural runoff
Gray color, sewage odor	Cross connection between sanitary and storm sewer
Floatable solids	Trash and debris
Bacteria/algae	Decomposing organic matter
Oil/Grease/Fuel	Gas stations
Oily Sheen	Auto repair shops/salvage yards
Multicolor water	Construction sites
Copper	Pesticides, plating, paint shops, or spills
Phenols	Wood preservatives, pesticides
High or low pH	Plastic/fiberglass shops, metal plating, masonry wastes
Metal/concrete corrosion	Metal plating
Inhibited vegetation	Various
Unusual colors/odors	Various
Cloudy/opaque water	Metal fabrication
Discolored sediments	Metal fabrication
Volatile chemical odor	Painting, vehicle/equipment repair, metal plating
High chlorine	Swing pools/chlorinated drinking water
Pungent/burning odor	Chemical industry
Sediment deposits	Construction site
Cloudy appearance	Erosion
Soapy film, detergents, foam	Laundries

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TABLE D-3
AUTHORIZED AND UNAUTHORIZED NON-STORM WATER DISCHARGES

Authorized Sources: Non-storm water discharges authorized by the General Permit:

- Fire hydrant flushing;
- Potable water sources, including water related to the operation, maintenance, or testing of potable water systems;
- Drinking fountain water;
- Atmospheric condensate including refrigeration, air conditioning, and compressor condensate;
- Irrigation drainage;
- Landscape watering;
- Springs;
- Ground water;
- Foundation and footing drainage; and
- Sea water infiltration where the sea waters are discharged back into the sea water source.

These discharges are authorized only if they are:

- In compliance with Regional Water Board requirements;
- In compliance with local agency ordinances and/or requirements;
- Specifically accompanied by BMPs described in the SWPPP to:
  - Prevent or reduce the contact of non-storm water discharges with significant materials or equipment, and
  - Minimize, to the extent practicable, the flow or volume of non-storm water discharges;
- Do not contain significant quantities of pollutants;
- Observed quarterly, including both any discharge and its sources, to ensure that BMPs are being implemented and are effective;
- Are reported and described annually as part of the Annual Report.

Unauthorized Sources: All other discharges are unauthorized and prohibited. Unauthorized non-storm water discharges which are typically found in storm water collection and discharge systems include:

- Discharge from floor drains, sinks, and other connections to the storm water collection and discharge system or to the ground;
- Boiler blowdown or cooling water;
- Vehicle and equipment wash water; and
- Steam cleaning wastes.

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ANNEX A

FORMS

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Structure Number:_____

FORM D-1: STRUCTURE INSPECTION FORM

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Structure Type/Location/Accessibility

Structure Type: ☐ Manhole ☐ Catch Basin ☐ Inlet ☐ Outlet ☐Area Drain ☐ Other:_____

Street Name:_____ **Nearest Building:**_____

Map Correct: : ☐ Yes ☐ No **Accessible:** ☐ Yes ☐ No ☐ Could not locate

Structure Opened: : ☐ Yes ☐ No

Surrounding Surface: ☐ Asphalt ☐ Concrete ☐ Gravel ☐ Soil ☐ Turf ☐ Other _____

Type of Surface Runoff: ☐ Industrial ☐ Commercial ☐ Residential ☐ Landscape

Physical Data

Gas Evident: ☐ Yes ☐ No **Structure Steps:** ☐ Safe ☐ Unsafe ☐ None ☐ N/A

Structure Opening Diameter (inches):_____ **Depth to Invert (inches):**_____

Structure Condition

Cover:	Frame:	Riser:	Cone:	Barrel:	Shelf:
☐ Good	☐ Good	☐ Good	☐ Good	☐ Good	☐ Good
☐ Damaged	☐ Damaged	☐ Damaged	☐ Damaged	☐ Damaged	☐ Damaged
☐ Missing	☐ Missing	☐ Missing	☐ Missing	☐ Missing	☐ Missing
☐ NA	☐ NA	☐ NA	☐ NA	☐ NA	☐ NA

Debris

Sediment:	Organic:	Oil & Grease:	Roots:	Other: _____
☐ None	☐ None	☐ None	☐ None	☐ None
☐ Light	☐ Light	☐ Light	☐ Light	☐ Light
☐ Medium	☐ Medium	☐ Medium	☐ Medium	☐ Medium
☐ Heavy	☐ Heavy	☐ Heavy	☐ Heavy	☐ Heavy

Flow

Water Observed: ☐ Yes ☐ No **Estimated Flow Rate (gpm):**_____

Source of Flow:_____

_____

_____

Undocumented Connection Found: ☐ Yes ☐ No

If "Yes", describe:_____

_____

_____

Potential Illicit Connection: ☐ Yes ☐ No

Additional Testing Required: ☐ Smoke Testing ☐ Dye Testing ☐ Video Inspection

Structure Number:_____

FORM D-1 (CONTINUED)

See Illicit Connection Report: ☐

Pipe 1	**Pipe 2**
Upstream ☐ Downstream ☐ Structure No.:_____ Pipe Size (inches):_____ Drop invert: ☐ Yes ☐ No Flow: ☐ Ponding ☐ Moving ☐ Tidal ☐ None	Upstream ☐ Downstream ☐ Structure No.:_____ Pipe Size (inches):_____ Drop invert: ☐ Yes ☐ No Flow: ☐ Ponding ☐ Moving ☐ Tidal ☐ None
Pipe 3	**Pipe 4**
Upstream ☐ Downstream ☐ Structure No.:_____ Pipe Size (inches):_____ Drop invert: ☐ Yes ☐ No Flow: ☐ Ponding ☐ Moving ☐ Tidal ☐ None	Upstream ☐ Downstream ☐ Structure No.:_____ Pipe Size (inches):_____ Drop invert: ☐ Yes ☐ No Flow: ☐ Ponding ☐ Moving ☐ Tidal ☐ None

Figure

Comments:_____

FORM D-2: NON-STORM WATER DISCHARGE VISUAL OBSERVATION FORM

1. Activity:_____

2. Bldg. No.:_____(6 digit maximum)

3. Date:_____ 4. Time:_____(military)

5. Team Leader:_____(3-digit initials)

6. Source I.D.:_____ (3-digit beginning with 001 for authorized non-storm water discharges)
(3-digit beginning with 100 for unauthorized non-storm water discharges)

7. Source Description:

Non-Programmatic Sources
- ☐ Drinking Fountain Water
- ☐ Refrigeration Condensate
- ☐ Compressor Condensate
- ☐ Irrigation Drainage
- ☐ Springs
- ☐ Ground water
- ☐ Foundation and Footing Drainage

Unauthorized Source
- ☐ _____
- ☐ Unknown

Programmatic Sources
- ☐ Air Conditioner Condensate
- ☐ Emergency Eyewash/Shower Station Maintenance
- ☐ Fire Hydrant Flushing
- ☐ Fire Suppression Sprinkler System
- ☐ Potable Water System Maintenance and Testing
- ☐ Landscape Watering
- ☐ Sea Water Infiltration Where the Sea Water is Discharged Back to the Sea Water Source

8. Discharge Observed: ☐ Yes ☐ No

9. Estimated Flow Rate: (gal/min)
- ☐ 0 (standing water)
- ☐ <.25 (trickle)
- ☐ .5
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ >5

10. Frequency of Occurrence:
- ☐ Continuous
- ☐ Hourly
- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Yearly
- ☐ Unknown

11. Contaminant Indications:
- ☐ None (observation complete)
- ☐ Discoloration_____
- ☐ Stains_____
- ☐ Odors_____
- ☐ Floatables_____
- ☐ Other_____

12. BMP Effectiveness: BMPs preventing or reducing contact of non-storm water discharges with pollutants?
☐ Yes ☐ No

Flow or volume of non-storm water discharge minimized?
☐ Yes ☐ No

13. Comments: ☐ Yes ☐ No

_____

_____

_____

_____

FORM D-2: FIELD DATA SHEET(continued)

1. Complete Items 1 through 5.
2. Identify each authorized non-storm water discharge source that is either discharging to the storm drain system or shows signs (e.g., staining beneath the source) of past discharges to the storm drain system.
   Note: Do not complete the Non-Storm Water Discharge Observation Form for the following discharge sources; these discharges will be addressed programmatically:
   - Fire hydrants, fire suppression systems, and associated equipment;
   - Landscape watering areas; and
   - Potable water sources related to O&M or testing water systems including:
     - backflow prevention assemblies,
     - hose bibbs, and
     - eye wash/shower stations that do not have the potential to contact pollutants.
3. Item 6: Assign a unique and sequential identification number (beginning with *Source I.D. 001*) for each authorized non-storm water discharge source identified in Step 2 that occurs at each building.
4. Describe the authorized non-storm water discharge source by completing Item 7.
5. Describe whether or not a discharge is observed by completing Item 8.
6. Record the estimated flow rate of the discharge by completing Item 9.
7. Record the frequency of occurrence of the discharge by completing Item 10.
8. Record any signs of contaminant indications by completing Item 11.
9. Evaluate BMP effectiveness by completing Item 12.
10. Identify whether or not there are any comments to report by completing Item 13; record any comments in the space provided.
11. Assign BMPs listed below for the *initial* survey only:

BMPs to prevent or reduce contact of authorized non-storm water discharges with pollutants:

- ☐ Divert discharge away from pollutant sources using piping.
- ☐ Divert discharge away from pollutant sources using structural controls such as swales, berms, or dikes.
- ☐ Use absorbent material to control or mitigate discharge.
- ☐ Relocate discharge source away from pollutant sources.
- ☐ Regularly clean the storm drain system downstream of the discharge source.

BMPs to minimize flow or volume of authorized non-storm water discharges:

- ☐ Regularly inspect and maintain discharge source.
- ☐ Terminate use of discharge source if not in proper working order.
- ☐ Minimize discharge during O&M or testing of discharge source.
- ☐ Collect discharge using drip pans or other container types.
- ☐ Place portable rubber maps over storm drain inlets to reduce or prevent discharge from entering storm drain system.

Unauthorized Non-Storm Water Discharges:

1. Complete Items 1 through 5.
2. Identify each unauthorized non-storm water discharge source that is either discharging to the storm drain system or shows signs (e.g., staining beneath the source) of past discharges to the storm drain system.
3. Item 6: Assign a unique and sequential identification number (beginning with *Source I.D. 100*) for each unauthorized non-storm water discharge source identified in Step 2 that occurs at each building.
4. Do not complete Item 7.
5. Describe whether or not a discharge is observed by completing Item 8.
6. Record the estimated flow rate of the discharge by completing Item 9.
7. Record the frequency of occurrence of the discharge by completing Item 10.
8. Record any signs of contaminant indications by completing Item 11.
9. Do not complete Item 12.
10. Record any comments in the space provided. Comments should include the source description and location at a minimum. Identify that comments have been recorded by completing Item 13.
11. Inform the Activity point-of-contact of the unauthorized non-storm water discharge as soon as possible.

FORM D-3: SMOKE TESTING SETUP FORM

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Location

Structure No.:_____

Structure Type: ☐ Manhole ☐ Catch Basin ☐ Inlet ☐ Outlet ☐ Area Drain ☐ Other:_____

Street Name:_____ **Nearest Building:**_____

Structure's Atmospheric Conditions

O_2_____ **H_2S**_____ **LEL**_____ **CO**_____

Number of Defects Found:_____

☐ **See Illicit Connection Report** **Additional Testing Required:** ☐ Dye Testing ☐ Video Inspection

Sketch

Effective Smoke Travel - List End Structures

_____ _____ _____

_____ _____ _____

_____ _____ _____

Comments:_____

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FORM D-4: SMOKE TESTING DEFECT FORM

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Location

Structure Number:_____

Upstream Structure Number:_____

Downstream Structure Number:_____

Type of Defect

☐ Area Drain ☐ Catch Basin ☐ Cleanout ☐ Lateral ☐ Plumbing ☐ Sewer

☐ Manhole ☐ None ☐ Roof Vent ☐ Storm Drain Crack ☐ Other: _____

Type of Surface

☐ Asphalt ☐ Concrete ☐ Gravel ☐ Soil ☐ Turf ☐ Other _____

Connection Source

☐ Building:_____ ☐ Process Discharge ☐ Sanitary Sewer ☐ Floor Drain

☐ Infiltration ☐ Tank ☐ Other:_____

☐ **See Illicit Connection Report** **Additional Testing Required:** ☐ Dye Testing ☐ Video Inspection

Sketch

Comments:_____

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FORM D-5: DYED-WATER TRACE TESTING FORM

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Location

Structure Number:_____ **Building/Facility Tested:**_____

Upstream Structure Number:_____

Downstream Structure Number:_____

Type of Illicit Connection

☐ Area Drain ☐ Catch Basin ☐ Cleanout ☐ Lateral ☐ Plumbing ☐ Sewer

☐ Manhole ☐ None ☐ Other: _____

For Direct Illicit Connection: Pipe Size:_____ Pipe Type:_____

Connection Source

☐ Building:_____ ☐ Process Discharge ☐ Sanitary Sewer ☐ Floor Drain

☐ Infiltration ☐ Tank ☐ Other:_____

☐ **See Illicit Connection Report** **Additional Testing Required:** ☐ Smoke Testing ☐ Video Inspection

Sketch

Test No.	Structure Checked	Upstream Structure	Dye Present		Flow (gpm)		Duration of Test (minutes)
			Yes	No	Before Dye Test	After Dye Test	

Comments:_____

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FORM D-6: VIDEO-CAMERA INSPECTION DATA FORM

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Location

Building Number:_____ **Outfall Number:**_____

Street Name:_____

Description/Data

Upstream Structure:_____ **Downstream Structure:**_____

Pipe Material: ☐ VCP ☐ RCP ☐ Other: _____

Pipe Diameter:_____ **Pipe Length:**_____

Pipe Depth to Invert:_____ **Joint Length:**_____

Possible Buried Manhole: ☐ Yes ☐ No **Requires Immediate attention:** ☐ Yes ☐ No

Camera Data

Tape Number:_____ **Camera Direction:** ☐Upstream ☐Downstream

Counter Start:_____ **Counter End:**_____

Signatures:_____

Comments:_____

Footage	4 1 2 3 Quadrant 1 2 3 4	Lateral Type	Structural	Condition	Continuous	Misc.	Comments

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Report Number:_____

FORM D-7: ILLICIT CONNECTION REPORT

Activity:_____ **Date:**_____

Team Leader:_____ **Time:**_____

Location

Structure Number:_____

Upstream Structure Number:_____

Downstream Structure Number:_____

Type of Illicit Connection

☐ Direct ☐ Overflow ☐ Bypass ☐ Leaky Plug ☐ Broken Pipe ☐ Broken Structure

☐ Leaky Weir ☐ Offfset Joint ☐ Surface ☐ Poor Maintenance ☐ Other: _____

For Direct Illicit Connection: Pipe Size:_____ Pipe Type:_____

Discharge Source

☐ Building:_____ ☐ Process Discharge ☐ Sanitary Sewer ☐ Floor Drain

☐ Infiltration ☐ Tank ☐ Other: _____

Discharge Content:_____

Corrective Action

☐ Disconnect ☐ Reroute ☐ Plug ☐ Berm ☐ Maintenance

☐ Other:_____

Sketch

Distance of Surface Material:_____ **Depth of Surface to Connection:**_____ **Type of Surface:**_____

Distance of Surface Material:_____ **Depth of Surface to Connection:**_____ **Type of Surface:**_____

Distance of Surface Material:_____ **Depth of Surface to Connection:**_____ **Type of Surface:**_____

Provide Comments on Back

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FORM D-8: SEDIMENT SAMPLING FIELD DATA SHEET

Activity:_____ **Date:**_____

Associated Outfall:_____ **Time:**_____

Team Leader:_____ **Structure Number:**_____

Data

Structure Description: ☐ Manhole ☐ Catch Basin ☐ Pipe ☐ Other:_____

Cleaning of Stucture Required Prior to Dye-Water Flooding or Video Inspection: ☐ Yes ☐ No

Weather: ☐ Precipitation ☐ Sunny ☐ Cloudy

Estimated Amount of Sediment in Structure:

Visual Observations

Color: ☐ N/A ☐ Clear ☐ Red ☐ Yellow ☐ Brown ☐Green ☐ Grey ☐ Other:____

Oiliness: ☐ None ☐ Slight ☐ Moderate ☐ Heavy

Texture: ☐ Sandy ☐ Silty ☐ Clayey ☐ Other:_____

Moisture Content: ☐ None ☐ Low ☐ Moderate ☐ Saturated

Odor: ☐ None ☐ Musty ☐ Sewage ☐ Rotten Eggs ☐ Gasoline ☐Ammonia ☐ Other:____

Sample I.D. No(s): _____

Number of Bottles: _____

Chain of Custody No.: _____

Required Analyses/Methods

Volatile Organics:	8260
Semi-Volatile Organics:	8270
Organochlorine Pesicides/PCBs:	8080
Arsenic:	8060
Mercury:	7471
Selenium:	7740
Barium, Cadmium, Chromium, Lead, Silver:	6010
Ignitability:	1010
Corrosivity:	9045
Reactivity:	SW-846 sections 7.3.3 and 7.3.4

Comments:

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APPENDIX E
NON-STORM WATER DISCHARGE VISUAL OBSERVATION INSTRUCTIONS

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APPENDIX E
NON-STORM WATER DISCHARGE
VISUAL OBSERVATION INSTRUCTIONS

The following tasks describe the protocols to perform Non-Storm Water Discharge Visual Observations. The protocols includes observations of any non-storm water flow at outfalls (Task 2) and observations of any authorized non-storm water discharge sources at buildings (Task 3).

TASK 1. PREPARE FOR NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS

The following procedures will be used when preparing for non-storm water discharge visual observations.

1. Compile information and materials into a Non-Storm Water Discharge Visual Observation notebook. The notebook will include:

   (a) General letter from the POC;
   (b) Activity location map;
   (c) Detailed facility location map;
   (d) Description and location of outfalls;
   (e) Non-Storm Water Discharge Visual Observation Forms; and
   (f) Health and Safety Plan.

2. Gather equipment appropriate for the non-storm water discharge observations including, as a minimum, the following:

   - Pencils;
   - Latex gloves;
   - Flashlight;
   - Rope;
   - Buckets;
   - Small, clear container for visual observation;
   - Pick or manhole puller;
   - Safety harness or flotation device; and
   - Paper towels.

3. Where outfalls are susceptible to tidal flow, identify when tides are at a level that will allow observation.

4. Notify the RPM and POC that the non-storm water discharge observations will be performed on a given date.

TASK 2. PERFORM NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS (OUTFALLS)

The approach to conducting the quarterly non-storm water discharge visual observations will follow the protocol developed during previous years of executing the elements of the SWDMP. Each outfall identified in the MRPP will be inspected quarterly (January-March, April-June, July-September, and October-December).

The following procedures will be used by the teams when observing each outfall.

1. Obtain security clearances in advance of fieldwork. Present pass/identification to enter the Activity. Drive to the area of the Activity to be observed and park the vehicle in a designated parking area.

2. Following the maps in the Field Notebook, proceed to the location of the outfall. It should be marked by an identification number near the location. If the identification number is not clearly marked, mark it so it will be visible during storm water discharge observations and sampling.

3. Fill out the sections of the Non-Storm Water Discharge Visual Observation Form (Outfalls). The form, Form E-1, is included in this appendix. It is important to provide the following information clearly and accurately while in the field prior to performing the outfall observation:

   (a) Item 1. Indicate the Activity I.D., using the legend provided.

   (b) Items 2, 3, 4, and 5. Note the outfall number, date, time, and initials of the team leader.

   (c) Items 6 and 7. Describe the outfall design and material using the descriptors provided.

4. If water is present, and is flowing, note this in Item 8 and estimate the flow rate in Item 9. Conduct a cursory investigation to determine the source. Indicate the results of this search in Item 16.

5. Record visual observations of any flow detected in Items 10-15 of the Non-storm Water Discharge Visual Observations Form (Outfalls).

6. In Item 17, indicate whether there are comments that you have made and recorded on the back of the form.

   (a) Record additional visual observations (if further description is needed), condition of the outfall (i.e., cracks, weathering, etc.), and obstacles encountered during the observation, etc.

(b) Document the findings of the source investigation on the back of the form. If the source of the flow is illicit or unknown, notify the RPM within 48 hours.

7. Sign and date the form.

8. Re-mark the outfall, if necessary, for subsequent observation and sampling.

TASK 3. PERFORM AUTHORIZED NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS (BUILDINGS)

Authorized non-storm water discharge visual observations will also be performed at industrial facilities. Each authorized non-storm water discharge identified in the SWPPP will be inspected quarterly. The description of the discharge source, quantity, frequency, characteristics, and associated drainage area will be documented on Form E-2, included in this appendix. The following procedures will be used to complete this task.

1. Complete Items 1 through 5.

2. Include in Item 6, the Source ID# for the authorized non-storm water discharge source to be observed (from the SWPPP). Note that Form E-2 is not completed for the following discharge sources if they do not have the potential to contact pollutants. These discharges are addressed programmatically:

   - Fire hydrants, fire suppression systems, and associated equipment;
   - Landscape watering areas; and
   - Potable water sources related to O&M or testing water systems including:

     - backflow prevention assemblies;
     - hose bibs; and
     - eye wash/shower stations that do not have the potential to contact pollutants.

3. Describe the authorized non-storm water discharge source by completing Item 7.

4. Describe whether a discharge is observed by completing Item 8.

5. Record the estimated flow rate of the discharge by completing Item 9.

6. Record the frequency of occurrence of the discharge by completing Item 10.

7. Record any signs of contaminant indications by completing Item 11.

8. Evaluate BMP effectiveness by completing Item 12.

9. Identify whether there are any comments to report by completing Item 13; record any comments in the space provided, and if needed, on the back of the form.

10. Sign and date the form.

Programmatic Authorized Non-Storm Water Discharges

The following authorized non-storm water discharges, provided they do not have the potential to contact industrial sources of storm water pollutants, will be handled programmatically:

- Fire hydrants, fire suppression systems, and associated equipment;
- Landscape watering areas; and
- Potable water sources related to O&M or testing water systems including:
  - backflow prevention assemblies;
  - hose bibs; and
  - eye wash/shower stations that do not have the potential to contact pollutants.

Personnel at the Activity responsible for the associated industrial facility will be interviewed quarterly to evaluate the implementation and effectiveness of the associated management practices used to minimize the flow and prevent contact of the above authorized non-storm water discharges with pollutants. The interview will document procedures, practices, and variances from the SWPPP. It also will include a discussion with the Activity personnel responsible for each discharge type. An annual inspection of a representative discharge from each discharge type will also be conducted. Forms E-3 through E-9 in Annex A are provided to document the quarterly interviews and the annual inspection.

ANNEX A

FORMS

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FORM E-1

NON-STORM WATER DISCHARGE VISUAL OBSERVATION FORM (OUTFALLS)

1. Activity

- 001 ☐ NAS North Island
- 002 ☐ NALF San Clemente
- 003 ☐ NOLF Imperial Beach
- 004 ☐ SERE Camp
- 005 ☐ NAB Coronado
- 007 ☐ SSC SD OTC Pacific Hwy
- 009 ☐ MCAS Miramar
- 011 ☐ SSC SD Point Loma
- 016 ☐ NAF El Centro
- 029 ☐ SUBASE
- 035 ☐ Hunters Point Shipyard

2. Outfall

0 1 2 3 4 5 6 7 8 9 | A B C D E F G H I J

☐ OLF

3. Date

/ /

0 1 2 3 4 5 6 7 8 9

5. Team Leader

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Fill in bubbles completely ●

...DO NOT cross ✗

or tick ✓

USE NO. 2 PENCIL ONLY

Make sure all erasures are complete
Right justify all entries.

4. Time

0 1 2 3 4 5 6 7 8 9

Do not mark in this area.

1997/98

Remember, at a minimum:
1. Complete items 1 through 8
2. If flow or standing water is observed complete 9 through 15
3. Conduct a cursory source investigation, and
4. Document the results in number 16.

Signature _____ Date _____

OUTFALL DESCRIPTION

Space for comments _____

6. Design

Mark ONE

- ☐ Pipe
- ☐ Open channel
- ☐ Box culvert
- ☐ Catch basin
- ☐ Sheet flow

Condition: _____

7. Material

Mark all that apply

- ☐ Concrete or asphalt
- ☐ Metal (smooth wall)
- ☐ Corrugated metal
- ☐ Plastic
- ☐ Soils
- ☐ Vegetated
- ☐ Rocks
- ☐ Other: _____

8. Staining

Mark all that apply

- ☐ None
- ☐ Oily
- ☐ Paint
- ☐ Concrete residue
- ☐ Algae
- ☐ Other: _____

WATER OBSERVATIONS

9. Water Observed?

- ☐ No (Observations Complete)
- ☐ Yes (answer 9 through 15 and document the results of a cursory source investigation in number 16)

11. Clarity

Mark all that apply

- ☐ Clear
- ☐ Cloudy
- ☐ Opaque

12. Sludge

Mark all that apply

- ☐ None
- ☐ Sediment/mud
- ☐ Organic
- ☐ Other: _____

13. Floatables

Mark all that apply

- ☐ None
- ☐ Oily sheen
- ☐ Sediment
- ☐ Sewage

14. Color

Mark all that apply

- ☐ None
- ☐ Red
- ☐ Yellow
- ☐ Green
- ☐ Brown
- ☐ Other: _____

15. Odor

Mark all that apply

- ☐ None
- ☐ Musty
- ☐ Sewage
- ☐ Rotten eggs
- ☐ Sour milk
- ☐ Fuel
- ☐ Other: _____

10. Est. Flow rate (gal/min)

- ☐ 0 (standing water)
- ☐ < .25 (trickle)
- ☐ .5
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ >5

16. Results of Source Investigation:

_____

_____

17. Comments?

- ☐ No
- ☐ Yes (Write in space above)

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FORM E-2

NON-STORM WATER DISCHARGE VISUAL OBSERVATION FORM (BUILDINGS)

1. Activity

- 001 NAS North Island
- 002 NALF San Clemente
- 003 NOLF Imperial Beach
- 004 SERE Camp
- 005 NAB Coronado
- 007 NRaD OTC Pacific Hwy
- 009 MCAS Miramar
- 011 NCCOSC Point Loma
- 016 NAF El Centro
- 029 SUBASE
- 030 NRaD OTC Taylor St
- 035 Hunters Point Shipyard
- 000 Do Not Use
- 000 Do Not Use

2. Building

0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

3. Date

/ /

0 1 2 3 4 5 6 7 8 9

4. Time

0 1 2 3 4 5 6 7 8 9

5. Team Leader

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

6. Source I.D.

0 1 2 3 4 5 6 7 8 9

7. Source Description

Non-Programmatic Sources

- Drinking Fountain Water
- Refrigeration Condensate
- Compressor Condensate
- Air Conditioning Condensate
- Irrigation Drainage
- Springs
- Groundwater
- Foundation and Footing Drainage
- Sea Water Infiltration

Programmatic Sources

- Fire Hydrant Flushing
- Potable Water Sources Related to O&M or Testing Water Systems
- Landscape Watering

Unauthorized Sources

- _____
- Unknown

Fill in bubbles completely.

... DO NOT cross out X *or tick* ✓

- *Use No. 2 Pencil Only*
- *Make Sure All Erasures are Complete*
- *Right Justify All Entries*

USE NO. 2 PENCIL ONLY

Please see instructions on back or attached.

Signature _____ Date _____

DISCHARGE OBSERVATIONS

8. Discharge Observed?

- Yes
- No

10. Frequency of Occurrence

- Continuous
- Hourly
- Daily
- Weekly
- Monthly
- Quarterly
- Yearly
- Unknown

11. Contaminant Indications

- None (obsevation of contaminant complete)
- Discoloration _____
- Stains _____
- Odors _____
- Floatables _____
- Other _____

9. Est. Flow rate (gal/min)

- 0 (standing water)
- < 0.25 (trickle)
- 0.5
- 1
- 2
- 3
- 4
- > 5

12. BMP Effectiveness

Yes / No	BMPs preventing or reducing contact of non-storm water discharges with pollutants?
Yes / No	Flow or volume of non-storm water discharge minimized?

13. Comments?

- Yes (Please write in the space below)
- No

_____

_____

_____

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NON-STORM WATER DISCHARGE OBSERVATION FORM (BUILDINGS) INSTRUCTIONS

Authorized Non-Storm Water Discharges:
Refer to Item 7 for a comprehensive list.

1. Complete Items 1 through 5.
2. Identify each authorized non-storm water discharge source that is either discharging to the storm drain system or shows signs (e.g., staining beneath the source) of past discharges to the storm drain system.
   Note: Do not complete the Non-Storm Water Discharge Observation Form for the following discharge sources; these discharges will be addressed programmatically:
   - Fire hydrants, fire suppression systems, and associated equipment;
   - Landscape watering areas; and
   - Potable water sources related to O&M or testing water systems including:
     - backflow prevention assemblies,
     - hose bibbs, and
     - eye wash/shower stations that do not have the potential to contact pollutants.
3. Item 6: Assign a unique and sequential identification number (beginning with *Source I.D. 001*) for each authorized non-storm water discharge source identified in Step 2 that occurs at each building.
4. Describe the authorized non-storm water discharge source by completing Item 7.
5. Describe whether or not a discharge is observed by completing Item 8.
6. Record the estimated flow rate of the discharge by completing Item 9.
7. Record the frequency of occurrence of the discharge by completing Item 10.
8. Record any signs of contaminant indications by completing Item 11.
9. Evaluate BMP effectiveness by completing Item 12. This is mandatory.
10. Identify whether or not there are any comments to report by completing Item 13; record any comments in the space provided.

Unauthorized Non-Storm Water Discharges:

1. Complete Items 1 through 5.
2. Identify each unauthorized non-storm water discharge source that is either discharging to the storm drain system or shows signs (e.g., staining beneath the source) of past discharges to the storm drain system.
3. Item 6: Assign a unique and sequential identification number (beginning with *Source I.D. 100*) for each unauthorized non-storm water discharge source identified in Step 2 that occurs at each building.
4. Complete Item 7, indicating whether the unauthorized source is known or unknown.
5. Describe whether or not a discharge is observed by completing Item 8.
6. Record the estimated flow rate of the discharge by completing Item 9.
7. Record the frequency of occurrence of the discharge by completing Item 10.
8. Record any signs of contaminant indications by completing Item 11.
9. Do not complete Item 12.
10. Record any comments in the space provided. Comments should include the source description and location at a minimum. Identify that comments have been recorded by completing Item 13.
11. Inform the Activity point-of-contact of the unauthorized non-storm water discharge as soon as possible.

FORM E-3

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

AIR CONDITIONER CONDENSATE

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Minimize non-storm water discharged from air conditioners	Non-storm water discharged from air conditioners is minimized through preventative maintenance. Properly maintaining an air conditioner reduces condensate discharge.			
Divert discharges away from areas of concern	Discharges from air conditioners are diverted from areas of concern using piping or other diversion structures or are collected using drip pans.			

Additional Recommended BMPs: _____

_____

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_____

Comments: _____

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FORM E-4

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

EMERGENCY EYE WASH/SHOWER STATION MAINTENANCE

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Implement a preventative maintenance schedule	Implement a preventative maintenance schedule that results in performing maintenance at the minimum frequency required to maintain a properly functioning system, thereby minimizing the discharges and achieving the goals of the Activity's water conservation program.			
Divert emergency eyewash/shower station maintenance flushings around potential pollutants	Divert emergency eyewash/shower station maintenance flushings past areas of concern using hoses or other means when contact with potential pollutants is possible.			
Use flushed water for landscape watering	Divert emergency eyewash/shower station maintenance flushings to landscaped areas where practical.			

Additional Recommended BMPs: _____

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Comments: _____

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FORM E-5

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

FIRE HYDRANT FLUSHING

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Implement a preventative maintenance schedule	Implement a preventative maintenance schedule that results in flushing at the minimum frequency required to maintain a properly functioning system, thereby minimizing the discharges and achieving the goals of the Activity's water conservation program.			
Divert fire hydrant flushings around potential pollutants	Divert flushed water past areas of concern with a hose or other means when contact with potential pollutants is possible.			
Use flushed water for landscape watering	Divert flushed water to landscaped areas where practical.			
Limit runoff, erosion, and damage to landscaping during fire hydrant flushing	Use a fire hose as necessary to spread the flushed water within a landscaped area to prevent runoff, erosion, or damage to the landscaping.			

Additional Recommended BMPs: _____

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_____

Comments: _____

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FORM E-6

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

FIRE SUPPRESSION SPRINKLER SYSTEM FLUSHING

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Implement a preventative maintenance schedule	Implement a preventative maintenance schedule that results in flushing at the minimum frequency required to maintain a properly functioning system, thereby minimizing the discharges and achieving the goals of the Activity's water conservation program.			
Divert fire suppression system flushings around potential pollutants	Divert fire suppression system flushings past areas of concern using hoses or other means when contact with potential pollutants is possible.			
Use flushed water for landscape watering	Divert flushed water to landscaped areas where practical.			
Prevent runoff, erosion, and damage to landscaping during fire suppression sprinkler flushing	Use a fire hose as necessary to spread the flushed water within a landscaped area to prevent runoff, erosion, or damage to the landscaping.			

Additional Recommended BMPs: _____

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Comments: _____

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FORM E-7

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

LANDSCAPE WATERING

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Utilize water delivery rates that do not exceed the infiltration rate of the soil	Apply water at rates that allow for infiltration into the soil to minimize ponding and runoff, thereby minimizing the non-storm water discharges and achieving the goals of the Activity's water conservation program.			
Observe areas being watered	Periodically observe areas that are watered to identify and correct damaged sprinkler systems, adjust sprinkler heads and identify areas of excess watering and runoff.			
Use automatic sprinkler timers	Where practical, us automatic timers to minimize runoff by turning off the system at the appropriate intervals.			
Avoid sprinkler overspray outside of the landscaped areas.	Avoid overspray to minimize runoff and contact with significant materials and equipment in the areas surrounding the targeted landscape.			
Prohibit placing, storing, or parking equipment and vehicles in areas subject to landscape watering.	The prohibition limits the potential for runoff caused by blocking the spray or water delivery patterns and limits any inadvertent runoff from containing significant quantities of pollutants picked up from equipment or vehicles.			
Minimize the potential for fertilizer/herbicide/pesticide residues contacting irrigation runoff.	Use fertilizer/herbicide/pesticide in accordance with manufacturer instructions and prevent overspray or application outside of the targeted landscaped area to minimize the potential for residues contacting irrigation runoff.			

Additional Recommended BMPs: _____

_____

Comments: _____

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FORM E-8

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

POTABLE WATER SYSTEM MAINTENANCE AND TESTING

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Implement a preventative maintenance schedule	Implement a preventative maintenance schedule that results in testing at the minimum frequency required to maintain a properly functioning system, thereby minimizing the discharges and achieving the goals of the Activity's water conservation program.			
Divert potable water system maintenance and testing flushings around potential pollutants	Divert potable water system maintenance and testing flushings past areas of concern using hoses or other means when contact with potential pollutants is possible.			
Use flushed water for landscape watering	Divert flushed water to landscaped areas where practical.			

Additional Recommended BMPs: _____

_____

_____

Comments: _____

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FORM E-9

PROGRAMMATIC AUTHORIZED NON-STORM WATER DISCHARGE QUARTERLY OBSERVATION FORM

SEA WATER INFILTRATION WHERE THE SEA WATER IS DISCHARGED BACK INTO THE SEA WATER SOURCE

Activity: _____ **Location:** _____

Contact: _____ **Observed by:** _____

Title: _____ **Date:** _____

Phone: _____ **Time:** _____

BMP	BMP Description	BMP Implemented?		
		Yes	No	N/A
Routinely clean catch basins	Clean catch basins regularly to prevent pollutants that may have collected in the storm drain system from being flushed into a receiving water by tidal action.			
Regularly inspect and maintain storm water conveyance system	Inspect and maintain the storm water conveyance system regularly to prevent pollutants that may have collected in the storm drain system from being flushed into a receiving water by tidal action.			

Additional Recommended BMPs: _____

_____

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_____

Comments: _____

_____

_____

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APPENDIX F
STORM WATER DISCHARGE VISUAL OBSERVATION INSTRUCTIONS

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APPENDIX F
STORM WATER DISCHARGE
VISUAL OBSERVATION INSTRUCTIONS

The following tasks describe the protocol to perform Storm Water Discharge Visual Observations. All forms, maps, and other field items should be prepared before beginning field work.

TASK 1. PREPARE FOR STORM WATER DISCHARGE VISUAL OBSERVATIONS

The following procedures will be used when preparing for storm water discharge visual observations.

1. Compile information and materials into a Storm Water Discharge Visual Observation Notebook. The notebook will include:

   (a) General letter from the POC;
   (b) Activity location map;
   (c) Detailed outfall location map;
   (d) Description and location of outfalls and associated industrial facilities;
   (e) Storm Water Discharge Visual Observation Forms; and
   (f) Health and Safety Plan.

2. Gather equipment appropriate for the storm water discharge visual observations, including, as a minimum, the following:

   - Pencils;
   - Latex gloves;
   - Flashlight;
   - Rope;
   - Buckets;
   - Small, clear containers for visual observations;
   - Pick or manhole puller;
   - Safety harness or floatation device;
   - Paper towels;
   - Boots; and
   - Raingear.

TASK 2. MONITOR WEATHER PATTERNS AND MOBILIZE FOR APPROPRIATE STORM

Appropriate weather monitoring and mobilization procedures are critical to the success of any storm water observation (and sampling) program. The following mobilization process for storm events is used:

- Storm Watch;
- Stand-by;
- On-call; and
- Mobilization.

Storm Watch (72-96 hours prior to event)

Weather will be tracked using weather television channels, news reports, and a weather forecasting service. During the storm watch phase, field schedules and transportation arrangements will be confirmed. Materials required for the storm event activities will be checked and placed within a designated staging area.

Stand-by (48 hours prior to event)

If the storm event is judged to be a likely candidate for observations/sampling within 48 hours, the storm will be upgraded to "stand-by" status. In the stand-by phase, field crews will be notified. Final field schedules will be prepared based on availability of personnel and the possible storm path. Appropriate Activity and Navy personnel will be contacted and informed of the potential for mobilization to occur.

On-call (24 hours prior to event)

When there is more than a 40 percent chance of rain in the subsequent 24 hours, the field crews will be put on "on-call" status.

Mobilization (four hours prior to event)

Once it is determined that a significant storm event is imminent, the lead field crew will mobilize to the staging area at the Activity. After arriving at the Activity, the lead field crew will visit any problematic outfalls to verify their locations and accessibility. The lead field team will also inform Base Security that personnel will be arriving to perform storm water observations.

At the first sign of precipitation at the Activity, the lead field team will mobilize the remainder of the field teams (if any). The teams should arrive within 30 minutes.

TASK 3. PERFORM STORM WATER DISCHARGE VISUAL OBSERVATIONS

After proceeding to the Activity to monitor, check with someone who is knowledgeable concerning current operations (i.e., POC or Duty Officer) to ensure that field personnel are in no danger or that events at the Activity will not impact the ability to monitor outfalls. All storm water discharge visual observations will be performed within one hour of the start of outfall discharge. If samples for laboratory analysis are collected, visual observations will be made concurrently with sample collection.

1. Following the maps in the Field Notebook, proceed to the location of the outfall. It should be marked by an identification number near the location. If the end of the outfall is under water due to wave action, tides or ponding, move upstream to the nearest accessible structure (e.g., catch basin). This can usually be located by sighting the line from the end of the outfall straight upstream (the maps may be useful). It may also be necessary to perform visual observations at an upstream structure if the end of the outfall is submerged.

2. Prepare Storm Water Discharge Visual Observation Form, Form F-1. It is important to provide the following information clearly and accurately while in the field, before performing the location observation:

   (a) Indicate the Activity name using the information provided;
   (b) Indicate the outfall number;
   (c) Enter the date and time of arrival;
   (d) Enter the initials of team leader; and
   (e) Indicate if the outfall is accessible.

3. Perform visual observations of the flow:

   (a) Note whether a sample is taken for analysis;
   (b) Note the rainfall conditions;
   (c) Indicate if there is flow;
   (d) Note whether there is standing water;
   (e) Note any floatables seen in the discharge or runoff.
   (f) Collect a sample in a clear container and record clarity, color, and odor characteristics. If none of the characteristic descriptions are appropriate, fill in the appropriate description under "other." For odor characteristics, do not sniff sample directly. Gently fan a hand over the surface of the sample and cautiously sniff the diluted vapors, if present.

(g) In the space provided, note reasonably suspected sources of pollutants based upon consideration of industrial activities and other conditions in the upstream area.

(h) Make any comments in the space provided or on the back of the form.

4. Sign and date the form in the space indicated.

FORM F-1

STORM WATER DISCHARGE VISUAL OBSERVATION FORM

Activity

- 1 NAS North Island
- 2 NALF San Clemente
- 3 NOLF Imperial Beach
- 4 SERE Camp, Warner Springs
- 5 NAB Coronado
- 7 NRaD OTC Pacific Hwy
- 9 MCAS Miramar
- 11 NCCOSC Point Loma
- 16 NAF El Centro
- 29 SUBASE
- 035 Hunters Point Shipyard
- Alternative 1
- Alternative 2
- Alternative 3

Outfall

0 1 2 3 4 5 6 7 8 9 | A B C D E F G H I J

OLF

Date

/ /

0 1 2 3 4 5 6 7 8 9

Time

0 1 2 3 4 5 6 7 8 9

Team Leader

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

USE NO. 2 PENCIL ONLY

Make sure all erasures are complete. Fill in bubbles completely

...DO NOT cross X

or tick ✓

Signature_____ Date_____

Outfall Accessible?

- Yes
- No (If "No", mark the following that apply)
  - Hazardous access
  - Secured area
  - Tidal influence
  - Other_____

Samples Collected?

- Yes
- No (If "No", explain in Comments Section)
- Not Required

FLOW OBSERVATIONS

Rainfall

- Drizzle
- Light rain
- Heavy rain

Flow Present?

- Yes
- No
- Tidal (bay areas)

Standing Water?

- Yes
- No

Floatables *Complete only if answered "Yes" to "Standing Water?" and/or "Flow Present?" Mark all that apply*

- None
- Oily Sheen
- Sewage
- Foam
- Trash
- Leaves and/or grass

Clarity *Complete only if answered "Yes" to "Standing Water?" and/or "Flow Present?" Mark all that apply*

- Clear
- Cloudy
- Opaque
- Suspended solids

Color *Complete only if answered "Yes" to "Standing Water?" and/or "Flow Present?" Mark all that apply*

- Not distinguishable
- Green
- Brown
- Yellow
- Other _____

Odor *Complete only if answered "Yes" to "Standing Water?" and/or "Flow Present?" Mark all that apply*

- None
- Petroleum
- Musty
- Ammonia
- Hydrogen sulfide (rotten eggs)
- Other_____

Source of Unexpected Observations (e.g., Oily Sheen, Sewage, Foam) Found?

- Yes (If "Yes", describe and identify location of source below)
- No
- Not required

_____

_____

_____

Comments

Yes _____

No _____

_____

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APPENDIX G
STORM WATER SAMPLING INSTRUCTIONS

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APPENDIX G
STORM WATER
SAMPLING INSTRUCTIONS

Based on previous investigations at the Activity, outfalls have been identified for storm water sampling and parameters to be analyzed at those outfalls have also been identified. The following tasks will be followed to complete storm water sampling:

TASK 1. PREPARE FOR STORM WATER SAMPLING

The following procedures will be used when preparing for storm water sampling:

1. Compile information and materials into a Field Notebook. The Storm Water Discharge Visual Observation notebook described in Appendix F can be used if the following items are included:

   (a) Locations for Outfall Sampling;
   (b) Blank Chain of Custody Forms; and;
   (c) Photographs of Outfalls (optional).

2. Gather equipment appropriate for storm water sampling including, at a minimum, the following:

   - Sample collector (disposable);
   - Specific conductivity meter
   - Specific conductivity calibration fluid
   - Rope;
   - Latex gloves;
   - Pencils, pens and grease pencils (china markers);
   - Flashlight;
   - Small, clear containers for visual observations;
   - Paper towels;
   - Plastic crate for carrying supplies;
   - Sample containers;
   - Buckets;
   - Scoops or dust pans;
   - Grab pole;
   - Coolers with double-bagged ice and bubble wrap;
   - Pick or manhole puller;
   - Extra sample containers;

- Safety harness or flotation device, if necessary;
- Boots; and
- Raingear.

TASK 2. MONITOR WEATHER PATTERNS AND MOBILIZE FOR APPROPRIATE STORM

Appropriate weather monitoring and mobilization procedures are critical to the success of any storm water sampling program. The following mobilization process for storm events is used:

- Storm Watch;
- Stand-by;
- On-call; and
- Mobilization.

This process is discussed in detail in Appendix F.

TASK 3. PERFORM STORM WATER SAMPLING

1. Safety and Security

After proceeding to the Activity to sample, check with someone who is knowledgeable concerning current operations (i.e., POC or Duty Officer) to ensure that field personnel are in no danger or that events at the Activity will not impact the ability to sample outfalls. After this information is obtained, proceed to the assigned sampling area.

2. Locating the Observation/Sampling Point

Following the maps in the Field Notebook, proceed to the location of the outfall. It should be marked by an identification number near the location. If the end of the outfall is under water due to wave action, tides or ponding, move upstream to the nearest accessible structure (e.g., catch basin). This can usually be located by sighting the line from the end of the outfall straight upstream (the maps may be useful). It may also be necessary to perform visual observations at an upstream structure if the end of the outfall is submerged.

All sampling locations near the shoreline in the Monitoring Plan may be tidally influenced. The outfall is the preferred sampling location. When the outfalls are submerged due to high tide, sampling personnel move to an upstream storm drain structure to collect the sample. In the event that the upstream structure is tidally influenced, (standing water or back and forth tidal flow) sampling personnel attempt to take a sheet flow sample at the upstream storm drain structure. Field personnel use an electrical conductivity meter to verify that the specific conductivity of the water is less than 25,000 S/cm and therefore, bay water is not being sampled.

3. Collect Storm Water Samples

- Put on clean latex gloves and prepare sample collection devices, if necessary.

> **Note: Do not allow the storm water to come in contact with skin, eyes, or mouth. Dispose of gloves after each use.**

- Remove the required pre-labeled sample containers from the ice chest and fill out the remaining information on the label with a grease pencil: date, time, and sampler's initials.

> **Note: Some of the sample containers contain a small amount of acid as a preservative. To prevent any possible harm to sampling personnel, do not inhale the vapors. When filling the containers, be careful not to spill any acid. If some of the acid does get on the skin, rinse the skin area thoroughly.**

- If samples are not collected directly into the sample container, rinse the sample collector three times with water discharging from the outfall before collecting the sample. Disposable sampling equipment will be used at each outfall.

- Collect representative samples just below the surface of the flow and midway across it or as close as possible.

Note: Avoid sampling

1) **Still or Ponded Water;**
2) **Sea Water;**
3) **Surface Films or Surface Debris; and**
4) **Loose Debris, Algae or Sediment.**

- Fill containers to the shoulder unless directed otherwise by the laboratory. All volatile organic compound (VOC) containers must be filled completely in order to eliminate any head space where volatiles could collect. After a VOC has been filled, cap it and turn it upside down to check that no air is in the container. If air is present refill the bottle.

- Cap each container tightly. Sign and date the custody seal, place it over the cap, and then place the sample in bubble-wrap into a cooler. The coolers will have a sufficient amount of ice to maintain a temperature of $4 \pm 2\,^{\circ}C$ during transport. If samples need to be stored for an extended period prior to delivery to the lab, it may be necessary to renew the ice.

- Fill out the chain of custody form for the sample with the following information:

  - Laboratory name;
  - Name of Facility (Activity);
  - Team number and sampler's initials;
  - Sample ID number and outfall number;
  - Sample date and time;
  - Analysis required, container type and preservatives; and
  - Indicate the samples name, signature, date, and time.

  An example Chain of Custody is presented in Appendix I as Form I-1.

APPENDIX H
MAINTENANCE ACTIVITIES FORM

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APPENDIX H
MAINTENANCE ACTIVITIES

This appendix contains a record of maintenance activities performed at the Activity that may affect the quality of storm water discharge from the Activity or facility.

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TABLE H-1

RECORD OF MAINTENANCE ACTIVITIES[1]

MAINTENANCE			MATERIALS REMOVED FROM THIS SITE[2]		
Date(s)	Location	Description	Description[3]	Estimated Quantity[4]	Disposition[5]

NOTES:

(1) Note that physical alteration or addition to the facility or Activity may require notification of the regulators , as described in Section 4.4 of the SWDMP.
(2) Identify the materials related to the maintenance performed.
(3) Describe each material.
(4) Estimate quantity of each material.
(5) Name the destination, such as a facility or contractor, for each material; and identify the method of disposal of the material.

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APPENDIX I
QUALITY ASSURANCE/QUALITY CONTROL GUIDANCE DOCUMENT PLAN

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APPENDIX I
QUALITY ASSURANCE/QUALITY CONTROL GUIDANCE DOCUMENT PLAN

1.0 INTRODUCTION

A Quality Assurance/Quality Control (QA/QC) plan is an important component of a monitoring program involving extensive field sampling and laboratory analyses. Because of the inherent variability in storm water samples, it is important to minimize additional variability introduced by sample handling and analytical techniques. This section describes the major elements of a QA/QC plan as related to sampling procedures and to methods of chemical analyses performed in the monitoring program. The plan fulfills the QA/QC requirements of the General Permit. This QA/QC Plan is intended as a guidance document for personnel or organizations that may be required to perform activities related to a Storm Water Discharge Management Program.

The objectives of a QA/QC plan are twofold: (1) to assure that all elements of the monitoring program are conducted and (2) to assure that all monitoring is conducted by trained personnel. Implementation of a sound QA/QC plan ensures that the data collected are of high quality and legally defensible.

QA/QC procedures should be followed in all phases of the monitoring program including sampling, laboratory analysis, and data reporting/validation. This guidance plan includes elements to address both sampling and analytical concerns, including sample contamination, variability, accuracy, and precision. This guidance plan is written in the format of an actual QA/QC Plan Document, but is intended as a guidance document for personnel or organizations performing activities related to a Storm Water Discharge Management Program at the subject Activity. Additional QA/QC measures may be required based on specific Activity or facility operations.

2.0 FIELD SAMPLING PROCEDURES

2.1 Reconnaissance and Preparation

Representative sampling point locations will be selected in accordance with feasibility, accessibility, and safety constraints, as described in Section 5. Communication with laboratories will be

established, and a Sampling Field Notebook will be prepared, as described in Appendix G. Field teams will be trained by experienced personnel. Supervisors will be responsible for coordination of the sampling efforts and for the preparedness of teams.

2.2 Sampling Field Notebook

A specific Sampling Field Notebook will be prepared and kept on file. The Sampling Field Notebook will contain the following items and procedural instructions, at a minimum:

- List of equipment;
- Location of sampling points (maps and descriptions);
- Field data sheets;
- Field sampling instructions; and
- Sample packing, transfer, and chain-of-custody forms and instructions.

These procedures will be followed by the field personnel in all phases of the field monitoring program.

2.3 Sample Handling

Field and laboratory personnel involved in the collection, custody, and transport of storm water samples will use current state-of-the-practice sampling and sample handling procedures. Personnel with field experience in storm water sampling will be responsible for training field sampling personnel.

2.4 Field Blanks

Potential sample contamination due to sample handling and storage methods may be assessed through analysis of blind equipment blanks at a frequency of 10 percent of the outfalls sampled. Equipment blanks will be made in the field by pouring reagent-grade laboratory water (i.e., water that is certified free of contamination by the laboratory) into pre-cleaned sampling equipment, and then submitting the samples in appropriate containers for laboratory analysis. Because volatile organic compounds may be present in the air during sampling and, therefore, may potentially contaminate samples collected in the field, trip blanks (one trip blank for each batch of samples) will also be included for

analysis by USEPA Method 600 series-(Volatile Organics). Trip blanks will be provided by the laboratory and will remain in the sample container during the entire field sampling period.

2.5 Sample Representativeness

Sample representativeness may be assessed at a frequency of 10 percent of the outfalls sampled through the collection and analysis of duplicate (additional) field samples. The results of the field duplicate will be compared to the original sample to estimate a relative percent difference between the two samples. These data will be used to assess the precision of both the field sampling and laboratory analysis programs and aid in interpreting the water data quality. Specific field duplicate precision objectives will be viewed as goals rather than requirements, due to the inherent variation in environmental samples.

3.0 CHAIN-OF-CUSTODY PROCEDURES

All sample custody and transfer procedures will be based on USEPA-recommended procedures and will emphasize careful documentation of sample collection and handling processes. Field teams will adhere to proper custody and documentation procedures for all sampling operations. Pre-formatted sample chain-of-custody forms will be used to document the relevant information for each sample bottle and the transfer of bottles to the laboratory. An example chain-of-custody form, Form I-1, is presented. It should be noted that custody seals must be signed, dated, and placed over cooler openings to allow for detection of potential tampering, when necessary.

4.0 LABORATORY PROCEDURES

Analyses for the routine parameters will be performed by laboratories that are certified by the state to conduct analyses according to 40 CFR 136, unless other test procedures have been specified by the General Permit or the RWQCB. Table I-1 presents a list of minimum QA/QC objectives associated with each analytical method. The laboratory will make every effort to meet target detection limits, holding times, and sample preservation techniques. The laboratory will also be required to meet the precision and accuracy objectives summarized in Table I-1, unless extreme sample matrix interference problems are encountered.

4.1 Accuracy

Standard Operating Procedures (SOPs) will contain mechanisms for demonstrating the relationship of the reported data compared to the "true" value(s). Accuracy will be checked by using the following:

- Traceability of Instrumentation - Each measurement device will be assigned a unique identification number. Documentation will identify the specific measurement device, where and when used, maintenance performed, and the equipment and standard used for calibration.

- Traceability of Standards - Field standards and each measurement device will be calibrated against a standard of known or higher accuracy when possible. Calibration standards will be traceable to available standards from the National Institute of Standards & Technology (NIST). If NIST standards are not available, other available, validated (primary) standards will be used from another nationally recognized source.

- Traceability of Data - Data will be documented to allow complete reconstruction from initial field records through data storage system retrieval.

- Methodology - If available, Federal reference, equivalent, or approved alternate test methods will be used. Other methodology will be fully documented and justified.

- Reference or Spiked Samples - Recoveries will be within predetermined laboratory methodology acceptance limits. Unacceptable recoveries will be identified and documented.

- All accuracy requirements for the off-site laboratories will be specified in the respective laboratory quality assurance plans and must be acceptable to the QA/QC Manager. Laboratory accuracy will be evaluated by analysis of spike results. Accuracy for on-site measurements will be ensured by following standard operating procedures for sampling and by conducting routine calibration and maintenance of instruments.

- Accuracy will be estimated from the analysis of QC samples when true values are known, or from surrogate or matrix spike recoveries. Accuracy will be expressed as percent recovery. The formulas to calculate these values are:

$$Percent\ Recovery = 100\ x\ \frac{Measured\ Value}{True\ Value}$$

For QC Samples:

$$Percent\ Recovery: = 100\ x\ \frac{C_i - C_o}{C_t}$$

where:

C_i = Measured concentration of spike and sample
C_o = Measured concentration of sample only
C_t = Actual concentration of spike

Five percent of the samples will be analyzed as matrix spike duplicates. A known standard analyte concentration is first spiked (added) to an original sample and then duplicated. The accuracy of the analytical method is evaluated from the results of the analytical recoveries of the first (matrix spike) and second (matrix spike duplicate) spikes.

4.2 Precision

Laboratory precision will be assessed through the analysis of laboratory duplicates (i.e., analysis of two portions derived from the same sample) at the frequency of 10 percent of the samples. In addition, 5 percent of the samples will be analyzed as matrix spike duplicates (matrix spike and matrix spike duplicate analyses, as described above). Combined field and laboratory precision will be evaluated through the analysis of field duplicate samples. Precision of on-site instruments will be assessed through frequent calibration checks and through measurement of duplicate samples. Precision of on-site measurements will be 50 percent maximum relative percent difference (RPD). Precision will be estimated by the analysis of replicate samples and will be expressed, if three or more values are determined, as the standard deviation, which will be determined according to the following equation:

$$S = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (x_i - \bar{x})^2}$$

where:

S = Standard deviation

x_i = Individual measurement result
n = Number of measurements
$\bar{x}$ = Arithmetic means of replicate measurements

Relative standard deviation may also be reported. If so, it will be calculated as follows:

$$RSD = \frac{100(S)}{\bar{x}}$$

where:

RSD = Relative standard deviation, expressed in percent
S = Standard deviation
$\bar{x}$ = Arithmetic mean of replicate measurements

Precision will be estimated by calculation of relative percent difference (relative range), if only two values are determined, using the following equation:

$$RPD = (100)\frac{D_1 - D_2}{0.5(D_1 + D_2)}$$

where:

RPD = relative percent difference
D_1 = the larger of the two observed values
D_2 = the smaller of the two observed values

4.3 Laboratory Blanks

Sample contamination resulting from laboratory analysis procedures or sample storage methods will be assessed through the analysis of laboratory blanks, and equipment blanks, if required. Laboratory blanks (reagent and/or method) will be reported for each day or batch of samples that are analyzed.

4.4 Completeness

All reported analyses will be evaluated against the requested analyses to assess the completeness of the analytical characterization of the water samples. Any missing data will be accounted for by the laboratory or field sample control programs. Completeness will be reported as the percentage of all measurements whose results are judged to be valid under normal conditions. The following formula will be used to estimate completeness:

$$C = 100\frac{V}{T}$$

where:

C = percent completeness
V = number of measurements judged valid
T = total number of measurements

5.0 DATA REDUCTION, VALIDATION, AND REPORTING

Overall data quality will be assessed by the person responsible for QA/QC for the sampling activities, based on sampling and analytical conditions, adherence to internal QC procedures, and results of accuracy and precision checks. Actual detection limits will be reported in the final report summary along with the results of the external QA samples, field duplicates, laboratory duplicates, matrix spike, matrix spike duplicates, and equipment and reagent blanks. Corrective action will be identified by the QA/QC leader, if needed.

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TABLE I-1
QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES

Parameter	Methodology and Method	Maximum Holding Time	Preservation[1]	Container Size/Type[2]	Dup RPD %	MS RPD %	Matrix Spike % Recovery	Units	Detection Limit
TOC	IR 415.1	28 days	4°C, pH<2, H_2SO_4	250 mL glass amber	25	25	75-125	mg/L	1
O&G	IR 413.1 or 1664 when adopted	28 days	4°C, pH<2, H_2SO_4	1x1 liter glass amber	25	25	40-134	mg/L	0.05
PCBs	GC/MS 625	7 days (extract) 40 days (analysis)	4°C	1x1 liter glass amber	30	30	36-139	µg/L	0.5
VOCs	GC/MS 624	14 days	4°C, pH<2, HCl	3x40 mL VOA	25	25	55-134	µg/L	[3]
BNA	GC/MS 625	7 days (extract) 40 days (analysis)	4°C	1x1 liter glass amber	50	50	13-145	µg/L	[3]
MBAS	Colorimetric 5540C	48 hours	4°C	1x25 mL	30	30	57-138	mg/L	0.1
Carbamates	HPLC 632	7 days (extract) 40 days (analysis)	4°C	1x1 liter glass amber	45	45	34-134	µg/L	0.35-5
Chlorinated Herbicides	GC/ECD 3550/8150	7 days (extract) 40 days (analysis)	4°C	1x1 liter glass amber	50	50	43-127	µg/L	0.2-0.4
Glycol	GC/FID 8015 mod.	7 days (extract) 14 days (analysis)	4°C, pH<2,HCL	1x1 liter glass amber	25	25	70-125	mg/L	5
Alcohols	GC/FID 8015 mod.	7 days (extract) 14 days (analysis)	4°C, pH<2,HCL	1x1 liter glass amber	25	25	70-125	µg/L	10
Explosives (nitroaromatics and nitroamines)	HPLC 8330	7 days (extract) 40 days (analysis)	4°C	1x1 liter glass amber	50	50	40-150	mg/L	4-50
Cyanide	Spectrophotometric 335.2	14 days	4°C, pH>12,NaOH	250 mL plastic	45	45	50-130	µg/L	0.01
Ag	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	0.2
Al	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	0.1

Notes and a key to abbreviations are provided at the end of the table.

TABLE I-1 (continued)
QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES

Parameter	Methodology and Method	Maximum Holding Time	Preservation[1]	Container Size/Type[2]	Dup RPD %	MS RPD %	Matrix Spike % Recovery	Units	Detection Limit
As	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	1
Cd	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	0.2
Cr	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	1
Cu	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	1
Fe	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	0.1
Hg	Cold Vapor-AA 245.1	28 days	pH<2, HNO_3	500 mL plastic	35	35	68-128	µg/L	0.2
Mg	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	0.1
Ni	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	2
Pb	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	63-131	µg/L	1
Se	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	1
Ti	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	10
Zn	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	1
Ten Metals	ICP 200.7	6 months	pH<2, HNO_3	500 mL plastic	20	20	75-125	µg/L	[4]
pH	Electrode 150.1	ASAP	4°C	100 mL plastic	25	--	--	units	--
NH_4	Colorimetric 4500-NH_3	28 days	4°C, pH<2, H_2SO_4	500 mL plastic	25	25	88-107	mg/L	0.05

Notes and a key to abbreviations are provided at the end of the table.

TABLE I-1 (continued)
QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES

Parameter	Methodology and Method	Maximum Holding Time	Preservation[1]	Container Size/Type[2]	Dup RPD %	MS RPD %	Matrix Spike % Recovery	Units	Detection Limit
Nitrate & Nitrite	Colorimetric 353.3	28 days	4°C, pH<2, H_2SO_4	500 mL plastic	25	25	75-125	mg/L	[3]
Total P	Colorimetric 4500 PB, E	28 days	4°C, pH<2, H_2SO_4	500 mL plastic	25	25	75-125	mg/L	0.1
Sulfate	Turbidimetric 375.4	28 days	4°C	100 mL plastic	20	20	75-125	mg/L	10
Anions & Cations	IC 300	28 days	4°C	100 mL plastic	20	20	80-120	mg/L	[3]
Residual Chlorine	Titrimetric 330.5	ASAP	4°C	4 oz glass amber	20	20	--	mg/L	0.05
Asbestos	TEM	ASAP	4°C	250 mL plastic	50	--	--	million fibers/Liter	2
Fecal Coliform	Assay SM 9221C	6 hours	4°C, $Na_2S_2O_3$	Sterile 250 mL plastic	--	--	--	MPN/100mL	200
Fecal Streptococci	Assay SM 9230C	6 hours	4°C, $Na_2S_2O_3$	Sterile 250 mL plastic	--	--	--	MPN/100mL	20
SC	Electrode 120.1	28 days	4°C	100 mL plastic	25	--	--	µmhos/cm	1
BOD	Disolved Oxygen Depletion 405.1	48 hours	4°C	100 mL plastic	--	--	65-141	mg/L	2
COD	Titrimetric 410.1	28 days	4°C, pH<2, H_2SO_4	100 mL plastic	6	6	63-130	mg/L	5
TSS	Gravimetric 160.2	7 days	4°C	100 mL plastic	15	--	--	mg/L	8

Notes and a key to abbreviations are provided at the end of the table.

TABLE I-1 (continued)
QUALITY ASSURANCE/QUALITY CONTROL OBJECTIVES

NOTES:

Ag	Silver
Al	Aluminum
As	Arsenic
BNA	Base-neutral acid organic compounds
BOD	Biochemical oxygen demand
Cd	Cadmium
COD	Chemical oxygen demand
Cr	Chromium (Total)
Cu	Copper
Fe	Iron
Hg	Mercury
MBAS	Methylene blue active substances
MPN	Most probable number
NH_4	Ammonium
Ni	Nickel
O&G	Oil and grease
Pb	Lead
PCBs	Polychlorinated biphenyls
pH	Indicator of acidity or basicity
SC	Specific conductance
Se	Selenium
Ten Metals	Metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Zn) analysis by ICP and AA methods
Ti	Titanium
Total P	Phosphorus (Total)
TOC	Total organic carbon
TSS	Total suspended solids
VOCs	Volatile organic compounds
Zn	Zinc

Methodologies:

AA	Atomic absorption spectroscopy
ECD	Electron capture detection
FID	Flame ionization detection
GC	Gas chromatography
HPLC	High performance liquid chromatography
IC	Ion chromatography
ICP	Inductively coupled plasma atomic emission spectroscopy
IR	Infrared spectroscopy
MS	Mass spectrometry
SM	Standard method
TEM	Transmission electron microscopy

Anions & Cations:

HCO_3^-	Bicarbonate
CO_3^{-2}	Carbonate
Cl^-	Chloride
SO_4^{-2}	Sulfate
NO_3^-	Nitrate
F^-	Fluoride
OH^-	Hydroxide
Na^+	Sodium
K^+	Potassium
Ca^{+2}	Calcium
Mg^{+2}	Magnesium

(1) If preservation will be performed by the laboratory instead of the field crew, it must be coordinated with the laboratory in advance. In this case, the laboratory will be responsible for checking the pH of the samples.
(2) Container size and type may vary for different laboratories.
(3) The detection limits for the constituants of this analysis is less than or equal to the benchmark in Table B-2 Analyte Benchmarks.
(4) See the detection limit for the metals presented in this table.

Table I-2: Analyte Benchmarks

Analyte	Benchmark	Units	Source*
1,1,1-Trichloroethane	200	ug/L	3
1,1,2,2-Tetrachloroethane	1	ug/L	3
1,1,2-Trichloroethane	32	ug/L	3
1,1-Dichloroethane	5	ug/L	3
1,1-Dichloroethene	6	ug/L	3
1,2,3-Trichloropropane	42	ug/L	5
1,2,4,5-Tetrachlorobenzene	160	ug/L	6
1,2,4-Trichlorobenzene	70	ug/L	4
1,2-Dichlorobenzene	600	ug/L	4
1,2-Dichloroethane	0.5	ug/L	3
1,2-Dichloropropane	5	ug/L	3
1,2-Diphenylhydrazine	1	ug/L	7
1,3,5-TNB	0.63	ug/L	7
1,3-Dichlorobenzene	600	ug/L	4
1,3-DNB	0.63	ug/L	7
1,4-Dichlorobenzene	5	ug/L	3
1-Chloronaphthalene	1.2	ug/L	7
1-Naphthylamine	1.4	ug/L	7
2,3,4,6-Tetrachloroephenol	10	ug/L	1
2,4,5-T	70	ug/L	5
2,4,5-TP (Silvex)	10	ug/L	3
2,4,5-Trichlorophenol	10	ug/L	1
2,4,6-TNT	0.63	ug/L	7
2,4,6-Trichlorophenol	10	ug/L	1
2,4-D	0.20	ug/L	3
2,4-DB	10	ug/L	7
2,4-Dichlorophenol	10	ug/L	1
2,4-Dimethylphenol	300	ug/L	1
2,4-Dinitrophenol	300	ug/L	1
2,4-Dinitrotoluene	590	ug/L	6
2,4-DNT	0.63	ug/L	7
2,6-Dichlorophenol	10	ug/L	1
2,6-Dinitrotoluene	590	ug/L	6
2,6-DNT	0.63	ug/L	7
2-Butanone (MEK)	350	ug/L	5
2-Chloroethyl vinyl ether	3	ug/L	7
2-Chloronaphthalene	7.5	ug/L	6
2-Chlorophenol	10	ug/L	1
2-Hexanone	3.9	ug/L	7
2-Methylnaphthalene	1.4	ug/L	7
2-Methylphenol (o-Cresol)	35	ug/L	5
2-Naphthylamine	1.3	ug/L	7
2-Nitroaniline	1.2	ug/L	7
2-Nitrophenol	300	ug/L	1
2-Picoline	0.8	ug/L	7

Analyte	Benchmark	Units	Source*
2-Propanol (iso-propanol)	5000	ug/L	7
3,3'-Dichlorobenzidine	1.5	ug/L	7
3/4-Methylphenol (m/p-Cresol)	35	ug/L	5
3-Hydroxycarbofuran	0.49	ug/L	7
3-Methylcholanthrene	1.8	ug/L	7
3-Nitroaniline	1.2	ug/L	7
4,4'-DDD	3.6	ug/L	6
4,4'-DDE	14	ug/L	6
4,4'-DDT	0.02	ug/L	7
4,6-Dinitro-2-methylphenol	10	ug/L	7
4-Aminobiphenyl	10	ug/L	7
4-Bromophenyl phenyl ether	1.2	ug/L	7
4-Chloro-3-methylphenol	10	ug/L	1
4-Chloroaniline	1.5	ug/L	7
4-Chlorophenyl phenyl ether	1.3	ug/L	7
4-Methyl-2-pentanone (MIBK)	7	ug/L	7
4-Nitroaniline	1.3	ug/L	7
4-Nitrophenol	300	ug/L	1
7,12-Dimethylbenz(a) anthracene	10	ug/L	7
aa-Dimethylphenylamine	3.8	ug/L	7
Acenaphthene	420	ug/L	5
Acenaphthylene	300	ug/L	6
Acetone	700	ug/L	5
Acetophenone	700	ug/L	5
Acrolein (Propenal)	55	ug/L	6
Acrylonitrile	7550	ug/L	2
Aldicarb	3	ug/L	4
Aldicarb sulfone	2	ug/L	4
Aldicarb sulfoxide	4	ug/L	4
Aldrin	0.01	ug/L	7
alpha-BHC	0.01	ug/L	1
Aluminum	750	ug/L	2
Ammonia	6000	ug/L	1
Aniline	1.6	ug/L	7
Anthracene	2100	ug/L	5
Aroclor-1016 (PCB-1016)	0.13	ug/L	2
Aroclor-1221 (PCB-1221)	100	ug/L	2
Aroclor-1232 (PCB-1232)	0.32	ug/L	2
Aroclor-1242 (PCB-1242)	0.2	ug/L	2
Aroclor-1248 (PCB-1248)	2.54	ug/L	2
Aroclor-1254 (PCB-1254)	100	ug/L	2
Aroclor-1260 (PCB-1260)	0.48	ug/L	2
Arsenic	80	ug/L	1
Asbestos	7	mf/liter	4

Table I-2: Analyte Benchmarks

Analyte	Benchmark	Units	Source*
Baygon (Propoxur)	2.8	ug/L	5
Benz(a)anthracene	0.1	ug/L	4
Benzene	10	ug/L	2
Benzidine	1	ug/L	7
Benzo(a)pyrene	0.2	ug/L	4
Benzo(b)fluoranthene	0.2	ug/L	4
Benzo(g,h,i)perylene	300	ug/L	6
Benzo(k)fluoranthene	0.2	ug/L	4
Benzoic acid	11.2	ug/L	7
Benzyl alcohol	300	ug/L	6
beta-BHC	0.01	ug/L	1
Biological Oxygen Demand	30000	ug/L	2
Biochemical Oxygen Demand	30000	ug/L	2
Bis(2-chloroethoxy) methane	1.7	ug/L	7
Bis(2-chloroethyl) ether	1.5	ug/L	7
Bis(2-chloroisopropyl) ether	280	ug/L	5
Bis(2-ethylhexyl) phthalate	4	ug/L	3
Bromodichloromethane	100	ug/L	3
Bromoform	100	ug/L	3
Bromomethane	7	ug/L	5
Butyl Benzyl Phthalate (BBP)	3000	ug/L	2
C11-C22 (Diesel)	500	ug/L	7
C23-C30 (Motor oil)	500	ug/L	7
C23-C40	100	ug/L	7
C31-C40 (Heavy oil)	2500	ug/L	7
C8-C10 (Gasoline)	500	ug/L	7
C8-C40	100	ug/L	7
Cadmium	10	ug/L	1
Calcium	5.5	ug/L	7
Carbaryl	700	ug/L	5
Carbofuran	18	ug/L	3
Carbon tetrachloride	0.5	ug/L	3
Chemical Oxygen Demand	120000	ug/L	2
Chlordane	0.1	ug/L	3
Chloride	860000	ug/L	2
Chlorine Residue (total)	60	ug/L	1
Chlorobenzene	30	ug/L	3
Chlorodibromomethane	14	ug/L	5
Chloroethane	0.4	ug/L	7
Chloroform	100	ug/L	3
Chloromethane	2.8	ug/L	5
Chromium	20	ug/L	1
Chrysene	0.2	ug/L	4
cis-1,3-Dichloropropene	0.5	ug/L	3

Analyte	Benchmark	Units	Source*
Copper	30	ug/L	1
Cyanide (total)	10	ug/L	1
Dalapon (dichloroacetic acid)	200	ug/L	4
delta-BHC	0.01	ug/L	1
Dibenz(a,h)anthracene	0.3	ug/L	4
Dibenz(a,j)acridine	4.1	ug/L	7
Dibenzofuran	1.4	ug/L	7
Dibromomethane	0.6	ug/L	7
Dicamba	210	ug/L	5
Dichlorodifluoromethane	1400	ug/L	5
Dichloroprop	0.9	ug/L	7
Dieldrin	0.01	ug/L	7
Diesel	430	ug/L	7
Diethyl phthalate (DEP)	5000	ug/L	4
Dimethyl phthalate (DMP)	1000	ug/L	2
Di-n-butyl phthalate (DBP)	3	ug/L	7
Di-n-octyl phthalate (DOP)	2944	ug/L	6
Dinoseb (DNBP)	7	ug/L	4
Diphenylamine	1.4	ug/L	7
Electrical conductivity	900	umhos/cm	3
Endosulfan I	27	ug/L	1
Endosulfan II	27	ug/L	1
Endosulfan sulfate	27	ug/L	1
Endrin	0.01	ug/L	1
Endrin aldehyde	0.04	ug/L	7
Endrin ketone	0.04	ug/L	7
Ethanol	5000	ug/L	7
Ethyl methacrylate	1.4	ug/L	7
Ethyl methanesulfonate	5.7	ug/L	7
Ethylbenzene	3100	ug/L	2
Ethylene Glycol	14000	ug/L	5
Fecal Coliform	200	mpn/100 ml	1
Fecal Streptococci	20	mpn/100 ml	7
Fluoranthene	42	ug/L	2
Fluorene	280	ug/L	5
gamma-BHC (Lindane)	0.01	ug/L	1
Gasoline	8	ug/L	7
Heptachlor	0.01	ug/L	3
Heptachlor epoxide	0.01	ug/L	3
Hexachlorobenzene	1	ug/L	4
Hexachlorobutadiene	1.4	ug/L	5
Hexachlorocyclopentadiene	50	ug/L	5
Hexachloroethane	940	ug/L	6
HMX	0.63	ug/L	7
Indeno(1,2,3-cd)pyrene	0.4	ug/L	4

Table I-2: Analyte Benchmarks

Analyte	Benchmark	Units	Source*
Iodomethane	0.5	ug/L	7
Iron	1000	ug/L	2
Isophorone	140	ug/L	5
Lead	20	ug/L	1
m/p-Xylene	0.9	ug/L	7
Magnesium	200	ug/L	7
MCPA	27.8	ug/L	7
MCPP	37.8	ug/L	7
Mercury	0.4	ug/L	1
Methanol	5000	ug/L	7
Methiocarb	0.35	ug/L	7
Methomyl	180	ug/L	5
Methoxychlor	100	ug/L	3
Methyl methanesulfonate	1.8	ug/L	7
Methylene chloride	5	ug/L	4
m-Nitrotoluene	0.63	ug/L	7
Naphthalene	28	ug/L	5
Nickel	50	ug/L	1
Nitrate	680	ug/L	2
Nitrobenzene	6680	ug/L	6
N-Nitrosodimethylamine	3300000	ug/L	6
N-Nitroso-di-n-butylamine	3300000	ug/L	6
N-Nitroso-di-n-propylamine	1.4	ug/L	7
N-Nitrosodiphenylamine	3300000	ug/L	6
N-Nitrosopiperidine	1.1	ug/L	7
Oil and Grease	15000	ug/L	2
o-Nitrotoluene	0.63	ug/L	7
Oxamyl	200	ug/L	4
o-Xylene	1750	ug/L	3
p-Dimethylaminoazobenzene	1.2	ug/L	7
Pentachlorobenzene	160	ug/L	6
Pentachlorophenol (PCP)	10	ug/L	1
PH	0.00	s.u.	1
Phenacetin	1.3	ug/L	7
Phenanthrene	300	ug/L	6
Phenol	300	ug/L	1
Phosphorus (total)	2000	ug/L	2
p-Nitrotoluene	0.63	ug/L	7
Potassium	82	ug/L	7
Pronamide	53	ug/L	5
Pyrene	10	ug/L	2
RDX	0.63	ug/L	7
Rhenium	0.2	ug/L	7
Selenium	150	ug/L	1
Silver	7	ug/L	1
Specific Conductance (EC)	900	umhos/cm	3
Styrene	100	ug/L	4
Sulfate	250000	ug/L	3
Sulfite	1000	ug/L	7
Surfactants (MBAS)	500	ug/L	3
tert-Butanol	5000	ug/L	7
Tetrachloroethene	5	ug/L	3
Tetryl	0.63	ug/L	7
Titanium	10	ug/L	7
Toluene	10000	ug/L	2
Total Coliform	1000	colf/100 mL	1
Total Organic Carbon	1000	ug/L	7
Total Suspended Solids	60000	ug/L	1
Toxaphene	5	ug/L	3
TPH (IR)	1000	ug/L	7
trans-1,2-Dichloroethene	10	ug/L	3
trans-1,3-Dichloropropene	0.4	ug/L	7
Trichloroethene	2.7	ug/L	2
Trichlorofluoromethane	150	ug/L	3
Vinyl acetate	7.8	ug/L	7
Vinyl chloride	0.5	ug/L	3
Zinc	117	ug/L	2

* Notes provided on following page.

Notes:

* *The priority of the following reference sources was established to use the most appropriate water quality goal:*

Table I-2: Analyte Benchmarks (continued)

1. California Ocean Plan - Numerical Water Quality Objectives (California State Water Resources Control Board, "Water Quality Control Plan: Ocean Waters of California" Chapter IV, 22 March 1990).

2. USEPA Multi-Sector General Permit for Industrial Activities (60 Federal Register [FR] 50804, September 29, 1995, at page 50826).

3. Drinking Water Standards, Maximum Contaminant Levels - California (California Department of Health Services (California Code of Regulations [CCR], Title 22, Division 4, Chapter 15, "Domestic Water Quality and Monitoring").

4. Drinking Water Standards, Maximum Contaminant Levels - Federal (USEPA, 40 Code of Federal Regulations [CFR] Parts 141 and 143).

5. USEPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion.

6. USEPA National Ambient Water Quality Criteria - Saltwater Aquatic Life Protection (USEPA, "Ambient Water Quality Criteria" various dates).

7. Where sources 1-6 did not have a water quality goal for a given analyte, the laboratory's Detection Limit was used.

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Chain of Custody Record No. 5013

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5013

Lab PO#:	Lab:

Project name:	TtEMI technical contact:	Field samplers:
Project (CTO) number:	TtEMI project manager:	Field samplers' signatures:

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	No./Container Types: 40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar			Analysis Required (Preservative Added): VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables									

	Name (print)	Company Name	Date	Time
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Fed Ex #:

WHITE-Laboratory Copy YELLOW-Sample Tracker PINK-File Copy

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